CHEM-TRONICS
An Interlake Company
P.O. BOX 1804
EL CAJON, CALIFORNIA 92022

AREA CODE 619
TELEPHONE 448-2320
TELEX 183361
1150 W. BRADLEY
EL CAJON, CALIFORNIA 92020

FAX COVER SHEET

CHEM-TRONICS, INC.
Human Resources Dept.

(619) 258-5065
FAX (619) 258-5279

TO: PIERRE BELANGER

FAX NO. 415-744-1433

FROM: DAVID FVESTER

NUMBER OF PAGES INCLUDING COVER SHEET: _____
(Please call if you don't receive number of pages listed above.)

COMMENTS:

Operator: Carolyn **Time Sent:** 4:20 **Date:** 12-17-90

Mr. Pierre Belanger
U.S. EPA, Region 9
75 Hawthorne Street (H-4-3)
San Francisco, CA 94105

This is the information which you requested from Chem-Tronics as a conclusion during the meeting Dated 12/11/90:

- Installation of the phone in the filter press area. Completed on 12/7/90.
- The Haz-Mat response shed to be put in place next to the waste accumulation area. Completed on 12/13/90.(see Contingency Plan for list of items in shed and functions).
- Categorized containers in the waste accumulation area by State and Federal as follows:

  1. Waste paints one 55 gallon drum.(Fed)
  2. Waste Trichloroethane 55 gallon drum.(Fed)
  3. Waste xylene one 55 gallon drum.(Fed)
  4. Waste coolant twenty 55 gallon drums.(CA)
  5. Waste anti-freeze one 55 gallon drum.(CA)

  Items Completed 12/17/90.
- All Security Guards are familiarized with the Emergency Response Procedures, and retain written guidelines for emergencies. Completed 12/14/90.

Very Truly Yours,

David Ivester
Env./Safety Engineer

For more information Please call me at: Work (619) 258-5058
Home (619) 472-5724

Pierre Belanger FAX NUMBER: (415) 744-1493

To: Pierre Belanger
EPA Region 9
75 Hawthorne Street
San Francisco, CA 94105

Date: 12/18/90

Mr. Belanger,

In response to your request for pictures of the waste accumulation area. I have also submitted one picture showing a Balloon Plug that is implanted in the storm drain to eliminate any potential spill from leaving Chem-Tronic's premises. These are shown as follows:

Page 1.

Page 2.

Page 3.

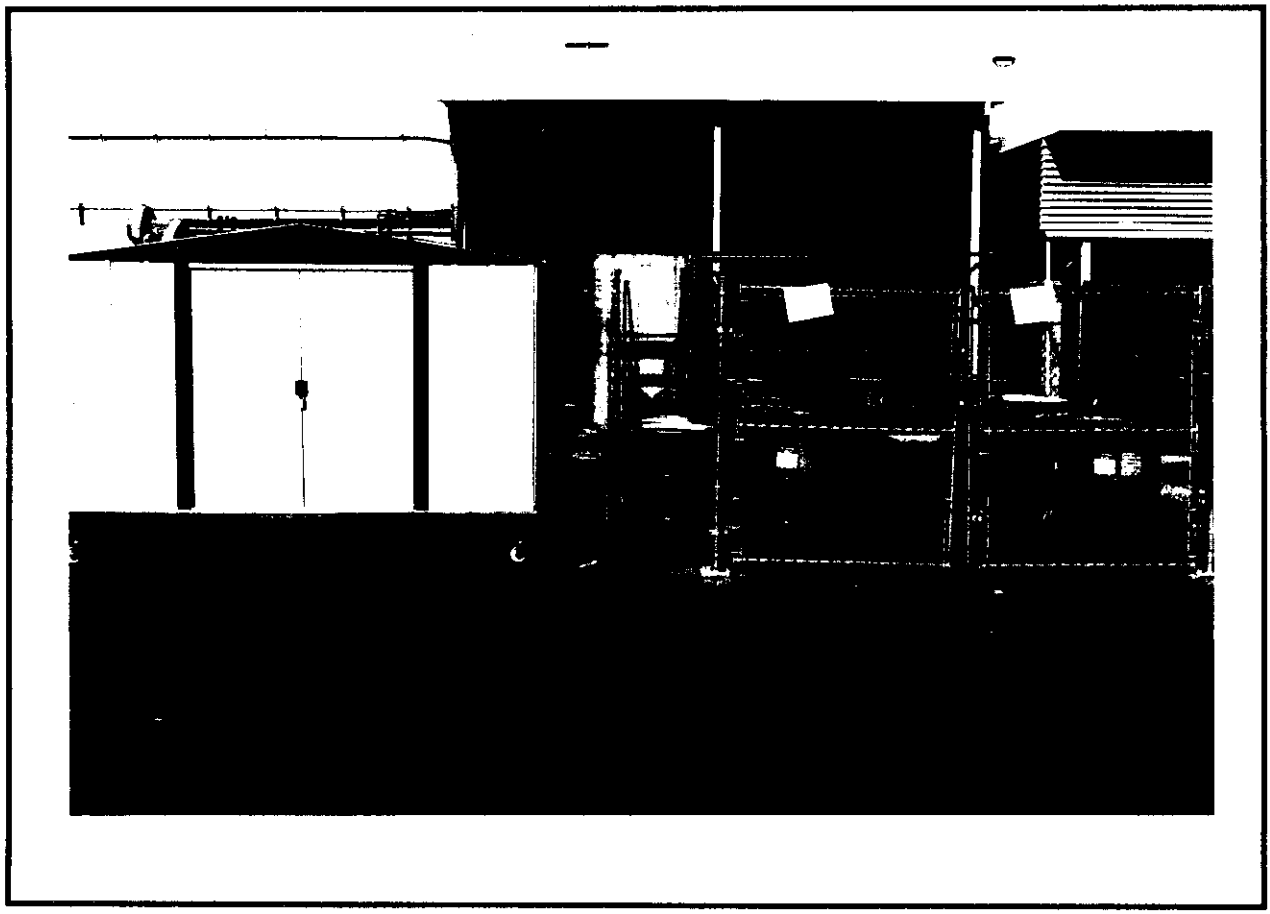
From the attached documents

Very Truly Yours

David Ivester
Env./Safety Eng.

1) This is a picture of the 90-Day Accumulation area with the shed containing the appropriate Response equipment in case of any unplanned emergency.

Shed with emergency response equipment. (see Contingency Plan for list and function of equipment)

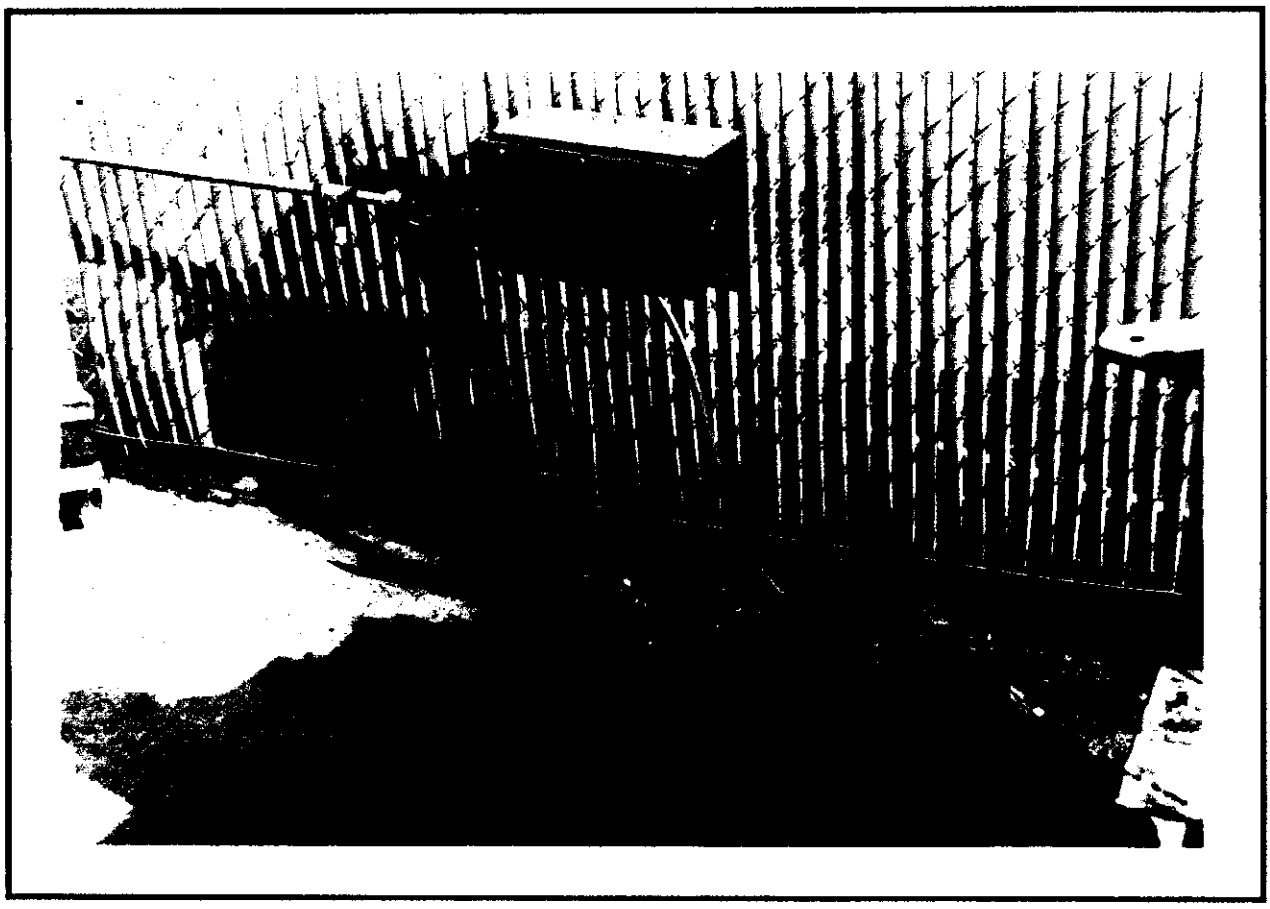


2) Picture of the area from the back as requested by Pierre Belanger.

Picture of the Waste Accumulation from the back looking toward the secondary containment area.

3) Picture of the inflatable balloon mechanism. The balloon has been inserted in the storm drain in case of a spill.

Picture showing the mechanism which inflates the drain balloon in case of a spill.
This would keep any spill from leaving the property.



To: Pierre Belanger
EPA Region 9
75 Hawthorne Street
San Francisco, CA 94105

Date: 12/21/90

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Mr. Belanger,

In response to your request from our meeting on 12/11/90 for an updated Contingency Plan. You will find it contained within the following two binders complete and updated.

Sections:

- Contingency Plan.
- Emergency Implementation Guide
- Emergency Guide for Security Personnel.

Very Truly Yours

David Ivester
Env./Safety Eng.

Chem-Tronics CHEMTRONICS
An Interlake Company

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EL CAJON, CALIFORNIA 92022

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1150 W. BRADLEY
EL CAJON, CALIFORNIA 92020

To: Pierre Belanger
EPA Region 9
75 Hawthorne Street
San Francisco, CA 94105

1-22-91
Items posted Plan
in Contingency
& Bus. Plan.

Date: 1/14/91

==========

Mr. Belanger,

This letter is in response to your request on 1/11/91 for the following items:

- o Inspection Logs for the month of August, for the 90-Day waste Accumulation area.
- o ✓ Contingency Plan to include the correct telephone numbers (Specifically David Ivester).Updated Immediate Response Actions, Pages 22-24 section.
- o ✓ An amendment to the Emergency Implementation Guide to include 40 CFR 265.56 (j) 1-7. Updated Recovery from An Incident section.
- o ✓ Memo to advise management their role in an emergency. Complete 1/8/91.
- o Amend the Emergency Implementation Guide to include Characteristic Waste D001. Updated Appendix 7, Identification Listing of Hazardous Waste section.
- o Amend the Emergency Implementation Guide to include Reporting Requirements to the EPA. Updated Regulatory Compliance section Pages 15-16.

Very Truly Yours,

David Ivester
Env./Safety Eng.

CHEMTRONICS
An Interlake Company

INTEROFFICE CORRESPONDENCE

TO: Managers and Supervisors

FROM: Ollis Hill

DATE: January 8, 1991

SUBJECT: Emergency Actions

The primary considerations for the Emergency Response Team at Chem-Tronics in any emergency is protecting people, then protecting property, and finally restoring operations. The Emergency Response Team has responsibility for responding to Fires, Chemical Spills, Floods, Earthquakes and any event which is unplanned and potentially dangerous to the Safety and Health of employees. In the event of an emergency please ask your employees to follow the procedures listed below.

1). REPORTING
All unplanned and uncontrolled Fires, Chemical Spills or other emergencies, no matter how small, must be reported to the Manager of Safety and Environment at Ext. 5062, as soon as possible. When a significant unplanned, potentially dangerous event occurs report the emergency on the emergency telephone number at Ext. 5064.

2). EMPLOYEE ACTIONS DURING EMERGENCIES
Only members of the Emergency Response Team will respond to emergencies. These employees have been trained in the proper use of fire extinguishers, respirations, and spill clean-up equipment.

For further information contact the Safety and Environmental Office, Ext. 5062.

Chem-Tronics CHEMTRONICS
An Interlake Company

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1150 W. BRADLEY
EL CAJON, CALIFORNIA 92020

December 11, 1990

HAND DELIVERED

Mr. Pierre Belanger
US EPA, Region 9
75 Hawthorne Street (H-4-3)
San Francisco, CA 94105

RE: EPA Inspection August 6, 1990
EPA Identification Number CAD990845513

Dear Mr. Belanger,

This letter and the accompanying materials respond to your letter of October 9, 1990 and the (RCRA) Compliance Evaluation Inspection. The EPA inspection took place on August 6, 1990, which lasted approximately four hours and was followed up by several detailed telephone calls to Chem-Tronics personnel. Chem-Tronics has, at all times, cooperated fully with your inspectors both during their brief visit to our facility and their subsequent telephone inquiries. In fact, we were surprised with your written response to the investigation, since the personal debrief by the team and their follow-ups did not indicate any potentially serious issues.

Mr. Ollis Hill, Manager Safety & Environment and Dave Ivester, Environmental/Safety Engineer, have been authorized to personally hand deliver this letter together with the Chem-Tronics' response to your inspection teams' observations. It appears that many, if not all, of the conditions labeled as "potential violations" were in fact not violations as the supporting documentation delivered to you shows. We believe that, the detailed photographs included reflect clearly that Chem-Tronics has complied fully with all applicable requirements. In the few instances where minor corrective work was requested that work has now been completed. Mr. Hill and Mr. Ivester are authorized to discuss the contents of Chem-Tronics response in detail with you and to provide any additional information you may need.

We appreciate you taking the time to meet with our representatives. It has always been the policy of Chem-Tronics to fully adhere to all applicable environmental laws, rules and regulations. We believe that the materials delivered to you reflect our good faith in implementing that policy.

Very truly yours,

John Linehan
Director, Human Resources

JL:cr

4.0 POTENTIAL VIOLATIONS

Potential violations of RCRA regulations are listed below. Each potential violation includes (1) reference to the specific paragraph and subparagraph of the RCRA regulations violated; (2) reference to the hazardous waste management unit and/or location of the potential violation; (3) description of how the regulatory performance standard was not met; (4) reference to photographs and/or other documents as appropriate to ensure that all potential violations cited are substantiated.

- Several containers in the 90-day hazardous waste accumulation area (Appendix C, Photograph 2) were not marked with the generator's name and address.
  [40 CFR Part 262.32(b)]

- Several containers in the 90-day hazardous waste accumulation area (Appendix C, Photograph 2) were accumulated on-site for greater than 90 days.
  [40 CFR Part 262.34(a)]

- Several containers in the 90-day hazardous waste accumulation area were not stored closed (Appendix C, Photograph 2).
  [40 CFR Part 262.34(a)(1) directing to 40 CFR Part 265.173(a)]

- Several containers in the 90-day hazardous waste accumulation area (Appendix C, Photograph 2) were not clearly marked with the date accumulation started.
  [40 CFR Part 262.34(a)(2)]

- Several containers in the 90-day hazardous waste accumulation area (Appendix C, Photograph 2) were not clearly marked with the words "Hazardous Waste."
  [40 CFR Part 262.34(a)(3)]

- The facility is not maintained and operated to minimize the possibility of fire, explosion, or releases of hazardous waste or hazardous waste constituents to air, soil, and surface water that could threaten human health or the environment, for the following reasons: (1) spills adjacent to the alkaline baths were noted during the inspection at Building 1; (2) piping and pumps associated with the neutralization process in Building 6 were leaking (Appendix C, Photograph 4); (3) the concrete and asphalt near the neutralization system in Building 6 was visibly etched, indicating that releases of acid have occurred (Appendix C, Photograph 4); and (4) releases from the air-scrubbers at Building 4 have occurred but the facility has not provided any information to document corrective measures taken to prevent any future releases.
  [40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.31]

- Chem-Tronics does not have an adequate internal communications or an alarm system capable of providing immediate emergency instructions to facility personnel in the filter press area outside of Building 4.
  [40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.32(a)]

- Chem-Tronics does not have a telephone or two-way radio system capable of summoning emergency assistance at the filter press area outside of Building 4.
  [40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.32(b)]

- Spill control equipment is not readily accessible at the 90-day hazardous waste accumulation area outside of Building 4.
[40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.32(c)]

- Personnel in the filter press area and 90-day hazardous waste accumulation outside of Building 4 do not have immediate access to internal alarm or communication systems, or voice or visual contact with another employee.
[40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.34(a)]

- Personnel in the filter press area outside of Building 4 cannot immediately access external emergency assistance.
[40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.34(b)]

- There was inadequate aisle space (Appendix C, Photograph 2) at the 90-day hazardous waste accumulation area to allow for unobstructed movement of fire and spill control equipment in an emergency.
[40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.35]

13. • The contingency plan does not describe the actions personnel must take to comply with 40 CFR Parts 265.51 and 265.56 responses.
[40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.52(a)]

- The contingency plan does not list all emergency equipment, including the location and physical description of each item on the list and a brief outline of its capability.
[40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.52(e)]

- The contingency plan was not revised when the contingency plan has failed in an emergency. [40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.54(b)]

- During a titanium dust fire at Chem-Tronics, the El Cajon Fire Department noted that the emergency coordinator did not take all reasonable measures to minimize spreading of the fire.
[40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.56(e)]

- When the contingency plan was implemented, the operating record did not include the date, time, or details of each incident that required implementation of the contingency plan. [40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.56(j)]

- When the contingency plan was implemented, Chem-Tronics did not submit a written report to the EPA Regional Administrator within 15 days after the incident.
[40 CFR Part 262.34(a)(4) directing to 40 CFR Parts 265.56(j) and 265.77(a)]

- Chem-Tronics stored containers greater than 90 days without applying for an extension or complying with 40 CFR Parts 264 and 265 and the permit requirements of 40 CFR Part 270. [40 CFR Parts 262.34(b) directing to 40 CFR Part 270.10]

- Chem-Tronics did not submit a Biennial Hazardous Waste Report to Federal or State regulatory agencies by March 1 of 1990. [40 CFR Part 262.41(a)]

- Chem-Tronics did not submit with the Biennial Hazardous Waste Report the EPA ID number, name, and address for each off-site TSD to which hazardous waste was shipped during the year. [40 CFR Part 262.41(a)(3)]

- Chem-Tronics did not submit with the Biennial Hazardous Waste Report the EPA ID number of each transporter used during the reporting year for shipments to a TSD.
[40 CFR Part 262.41(a)(4)]

6

- Chem-Tronics did not submit the description, EPA hazardous waste number, DOT hazard class, and quantity of each hazardous waste shipped off-site to a TSD. [40 CFR Part 262.41(a)(5)]

- Chem-Tronics did not determine that a hazardous waste was restricted from land disposal; specifically, manifest number 89815121 (Appendix D) indicates that F006 hazardous waste was not treated prior to land disposal. [40 CFR Part 268.7(a)]

- Chem-Tronics does not maintain records to verify that they notify TSDs that hazardous waste are restricted and require treatment prior to disposal (see manifest number 89815121, Appendix D). [40 CFR Part 268.7(a)(1)]

- Chem-Tronics does not maintain copies of all notices and certifications for at least 5 years. [40 CFR Part 268.7(a)(6)]

- Chem-Tronics did not contact nor locate a treatment and recovery facility prior to disposal at a land disposal facility (see manifest number 89815121, Appendix D). [40 CFR Part 268.8(a)(2)(ii)]

EPA INSPECTION ITEMS CATEGORIZATION

MAIN AREAS OF CONCERN

D = DRUM MANAGEMENT ITEMS
C = CONTINGENCY PLAN ITEMS
O = OPERATIONAL COMPLIANCE
B = BIENNIAL REPORT ITEMS
P = WASTE YARD UPGRADE PROJECT
R = RECORD KEEPING DOCUMENTATION

	POTENTIAL VIOLATIONS
D	Several containers in the 90-day hazardous waste accumulation area (Appendix C, Photograph 2) were not clearly marked with the date accumulation started.
D	Several containers in the 90-day hazardous waste accumulation area (Appendix C, Photograph 2) were not clearly marked with the words "Hazardous Waste." (40 CFR Part 262.34 (a)(3))
D	Several containers in the 90-day hazardous waste accumulation area (appendix C, Photograph 2) were not marked with the generator's name and address. (40 CFR Part 262.32(b))
D	Several containers in the 90-day hazardous waste accumulation area were not stored closed (appendix C, Photograph 2)
D	Several containers in the 90-day hazardous waste accumulation area (Appendix C, Photograph 2) were accumulated on-site for greater than 90 days. (40 CFR Part 262.34(a))
D	Chem-Tronics stored containers greater than 90 days with out applying for an extension or complying with 40 CFR Parts 264 and 265 and the permit requirements of 40 CFR Part 270. (40 CFR Part 262.34(b) directing to 40 CFR Part 270.10)
D	Spill control equipment is not readily accessible at the 90-day hazardous waste accumulation area outside of Building 4. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.32(c))
C	When the contingency plan was implemented, the operation record did not include the date, time, or details of each incident that required implementation of the contingency plan. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.56(j))
C	When the contingency plan was implemented, Chem-Tronics did not submit a written report to the EPA Regional Administrator within 15 days after the incident. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.77(a))
C	The contingency plan does not list all emergency equipment, including the location and physical description of each item on the list and a brief outline of its capability. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.52(e))
C	The contingency plan was not revised when the contingency plan has failed in an emergency. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.34(54)(b))
C	During a titanium dust fire at Chem-Tronics, the El Cajon Fire Department noted that the emergency coordinator did not take all reasonable measures to minimize spreading of the fire. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.56(e))
C	The contingency plan does not describe the actions personnel must take to comply with 40 CFR Parts 265.51 and 265.56 responses. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.52(e))

O 7.	The facility is not maintained and operated to minimize the possibility of fire, explosion, or releases of hazardous waste or hazardous waste constituents to air, soil, and surface water that could threaten human health or the environment, for the following reasons: (1) spills adjacent to the alkaline baths were noted during the inspection at Building 1; (2) piping and pumps associated with the neutralization process in Building 6 was visibly etched, indicating that releases of acid have occurred (Appendix C, Photograph 4); (3) the concrete and asphalt near the neutralization system in Building 6 was visibly etched, indicating that releases of acid have occurred (Appendix C, Photograph 4); and (4) releases from the air scrubbers at Building 4 have occurred but the facility has not provided any information to document corrective measures taken to prevent any future releases. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.31)
B	Chem-Tronics did not submit a Biennial Hazardous Waste Report to Federal or State regulatory agencies by March 1 of 1990. (40 CFR Part 262.41(a))
B 22	Chem-Tronics did not submit with the Biennial hazardous Waste Report the EPA ID number, name, and address for each off-site TSD to which hazardous waste was shipped during the year. (40 CFR Part 262.41(a)(3))
B 23	Chem-Tronics did not submit with the Biennial Hazardous Waste Report the EPA ID number of each transport used during the reporting year for shipments to a TSD. (40 CFR Part 262.41(a)(4))
B 24	Chem-Tronics did not submit the description, EPA hazardous waste number, DOT hazard class, and quantity of each hazardous waste shipped off-site to a TSD. (40 CFR Part 262.41(a)(5))
B 25	Chem-Tronics did not determine that a hazardous waste was restricted from land disposal; specifically, manifest number 89815121 (Appendix D) indicates that F006 hazardous waste was not treated prior to land disposal. (40 CFR Part 268.7(a))
B 26	Chem-Tronics does not maintain records to verify that they notify TSD's that hazardous waste are restricted and require treatment prior to disposal (see manifest number 89815121, Appendix D). (40 CFR Part 268.7(a)(1))
P 9.	Chem-Tronics does not have an adequate internal communications or an alarm system capable of providing immediate emergency instructions to facility personnel in the filter press area outside of Building 4. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.32(a))
P 10.	Chem-Tronics does not have a telephone or two-way radio system capable of summoning emergency assistance at the filter press area outside of Building 4. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.32(b))
P 11.	Personnel in the filter press area and 90-day hazardous waste accumulation outside of Building 4 do not have immediate access to internal alarm or communication systems, or voice or visual contact with another employee. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.34(a))
P 12	Personnel in the filter press area outside of Building 4 cannot immediately access external emergency assistance. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.34(b))
P 13	There was inadequate aisle space (Appendix C, Photograph 2 at the 90-day hazardous waste accumulation area to allow for unobstructed movement of fire and spill control equipment in an emergency. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.52)
R 27	Chem-Tronics does not maintain copies of all notices and certifications for at least 5 years. (40 CFR Part 268.7(a)(6))
R 28	Chem-Tronics did not contact nor locate a treatment and recovery facility prior to disposal at a land disposal facility (see manifest number 89815121, Appendix D). (40 CFR Part 268.8(a)(2)(ii))

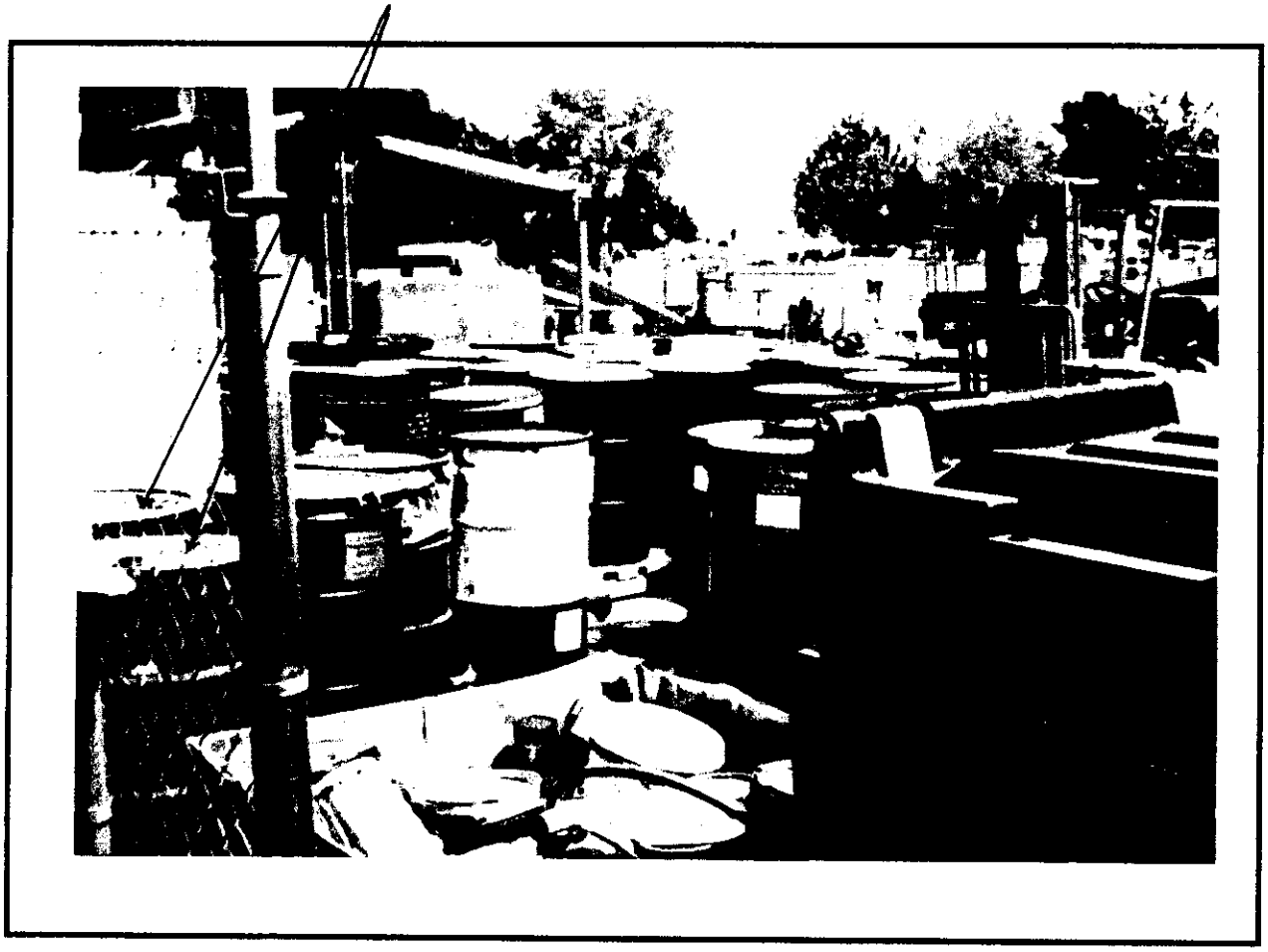
DRUM MANAGEMENT

1) **POTENTIAL VIOLATION:**
Several containers in the 90-day hazardous waste accumulation area (Appendix C, Photograph 2) were not clearly marked with the date accumulation started.

RESPONSE:
The containers in question were empties, not requiring a hazardous waste label. These containers are stored in the 90 day accumulation yard to be immediately available for a small spill response clean up. These empty drums will be labeled as empty drums.

PICTURE # 01 . ITEM # 01 . SUBJECT: Reference EPA Report Appendix - C, Photograph - 2.

Several containers in the 90-day hazardous waste accumulation area were not clearly marked with the date accumulation started because they were empties.

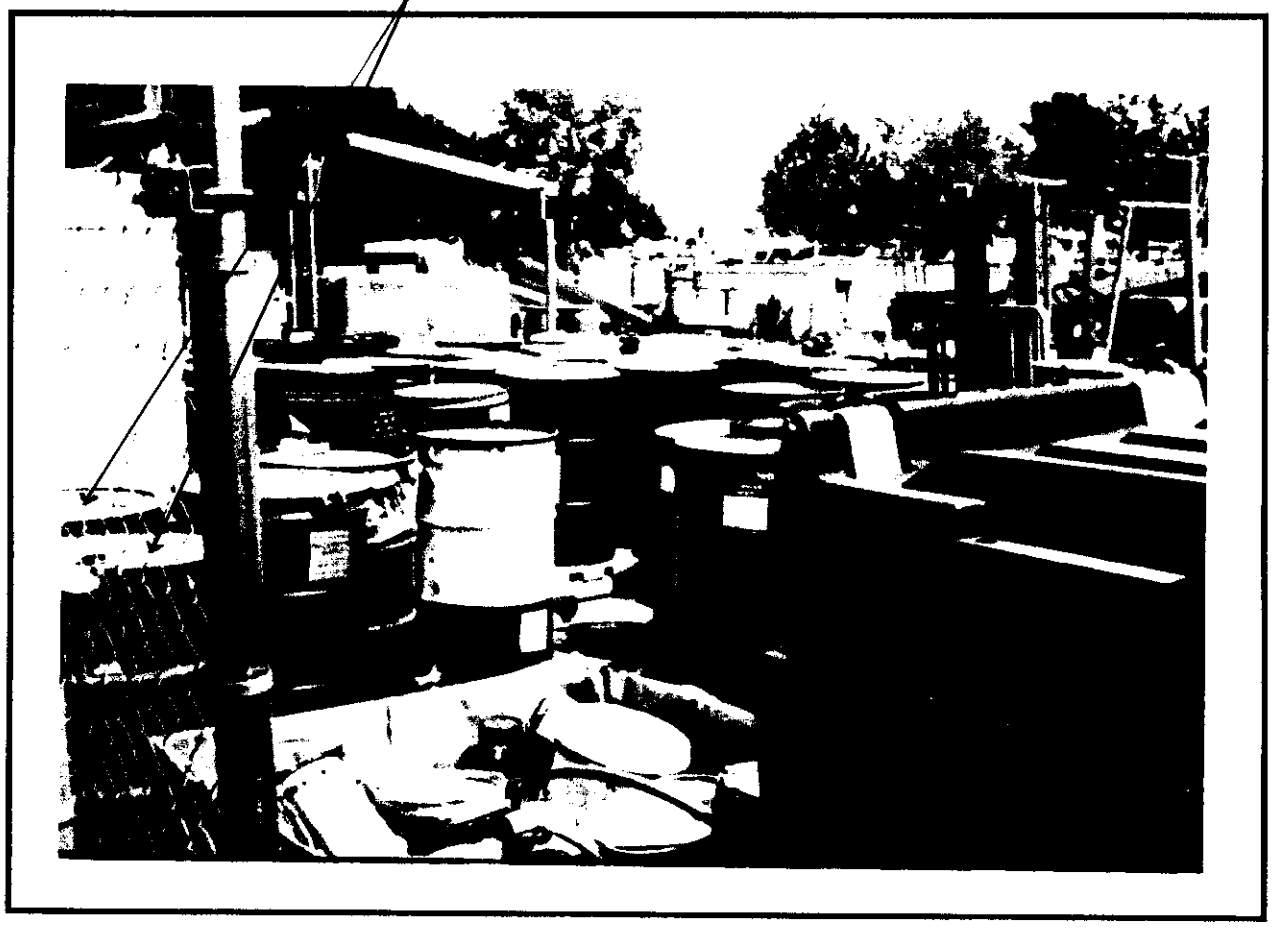


2) **POTENTIAL VIOLATION:**
Several containers in the 90-day hazardous waste accumulation area (Appendix C, Photograph 2) were not clearly marked with the words "Hazardous Waste." (40 CFR Part 262.34 (a)(3))

RESPONSE:
The containers in question were empties, not requiring a hazardous waste label. These empty drums have now been removed from the 90-day hazardous waste accumulation area.

PICTURE # 02, ITEM # 02, SUBJECT: Reference EPA Report Appendix - AC, Photograph - 2.

Several containers in the 90-day hazardous waste accumulation area (Appendix C, Photograph 2) were not clearly marked with the words "Hazardous Waste," because they were empties



3) **POTENTIAL VIOLATION:**

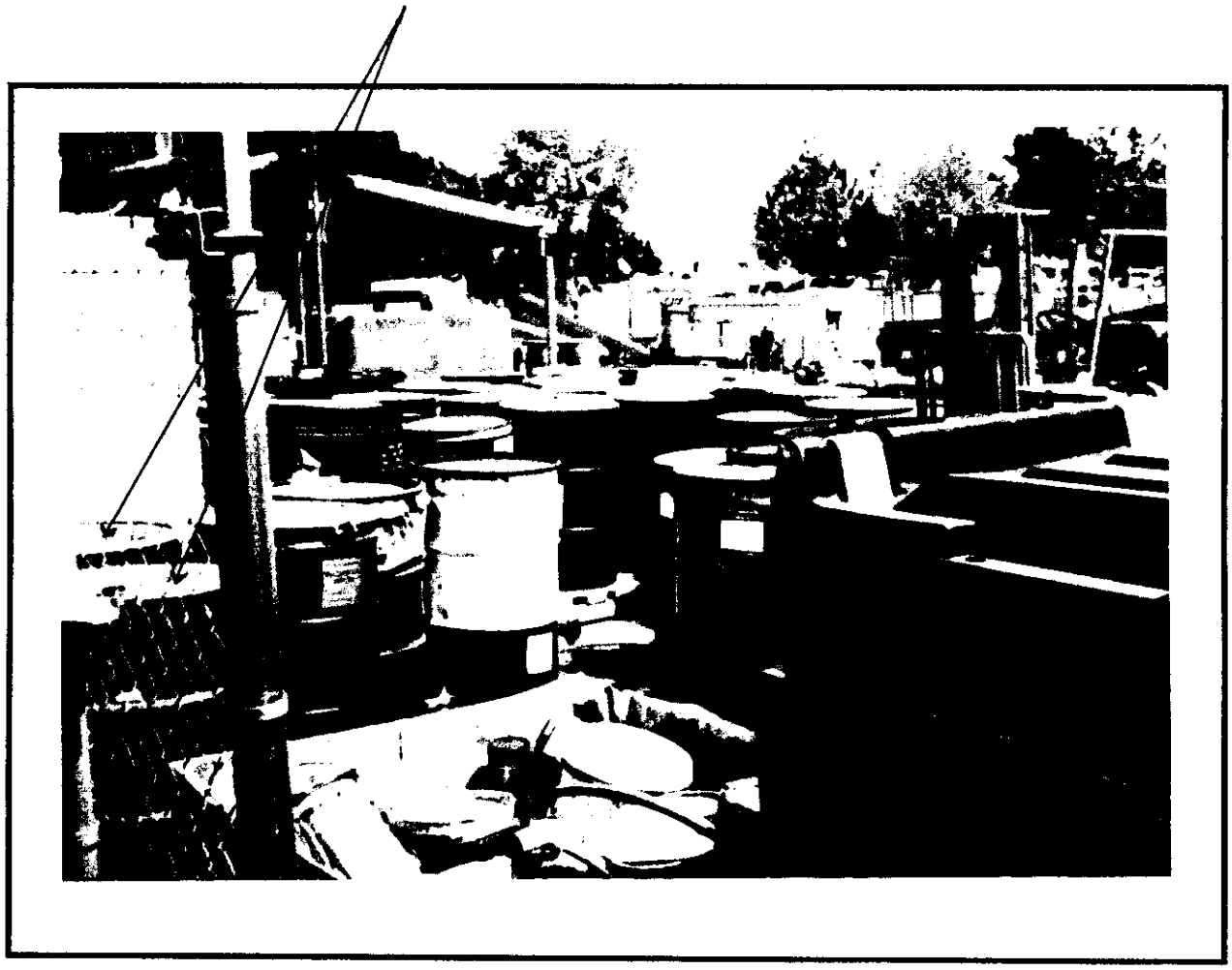
Several containers in the 90-day hazardous waste accumulation area (appendix C, Photograph 2) were not marked with the generator's name and address. (40 CFR Part 262.32(b))

RESPONSE:

The containers in question were empties, not requiring a hazardous waste label. These drums have now been removed from the 90-day hazardous waste accumulation area.

PICTURE # 03. ITEM # 03.
SUBJECT: Reference EPA Report Appendix - C, Photograph - 2.

Several containers in the 90-day hazardous waste accumulation area were not marked with the generator's name and address since they were empties.



4) POTENTIAL VIOLATION:

Several containers in the 90-day hazardous waste accumulation area were not stored closed (appendix C, Photograph 2)

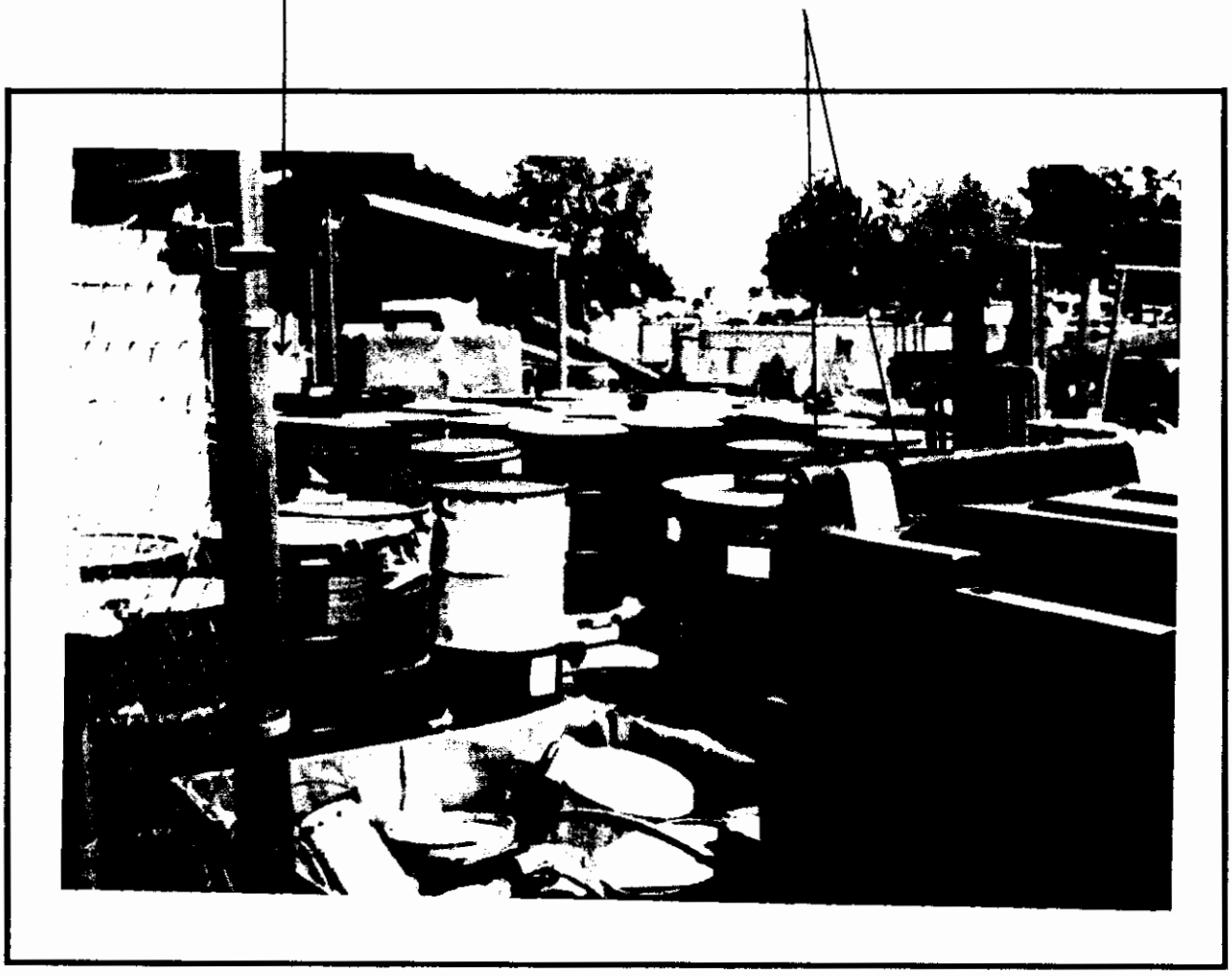
RESPONSE:

These containers in question were empties that had been triple rinsed with the tops cut off, staged to be crushed in the drum crusher.

PICTURE # 04. ITEM # 04.
SUBJECT: Reference EPA Report Appendix - C, Photograph - 2.

DRUM CRUSHER

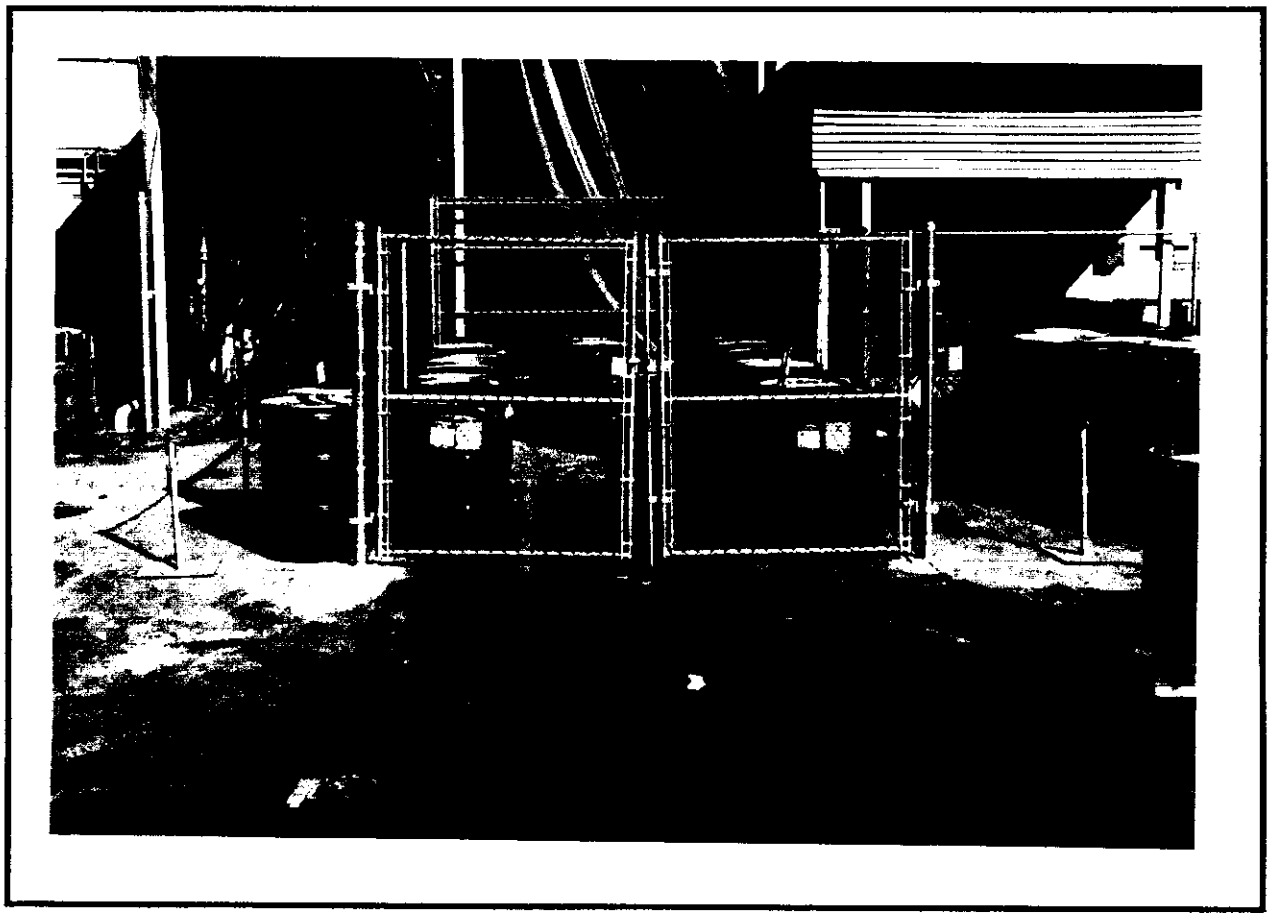
Several containers in the 90-day hazardous waste accumulation area were not marked with the generator's name and address because they were empties.



5) **POTENTIAL VIOLATION:**
Several containers in the 90-day hazardous waste accumulation area (Appendix C, Photograph 2) were accumulated on-site for greater than 90 days. [40 CFR Part 262.34(a)]

RESPONSE:
The drums in question are still in the process of being filled in the satellite generator area next to the 90 day accumulation area.

PICTURE # 05, ITEM # 05.
SUBJECT: The fence around the 90-day hazardous waste accumulation area.



6) **POTENTIAL VIOLATION:**
Chem-Tronics stored containers greater than 90 days with out applying for an extension or complying with 40 CFR Parts 264 and 265 and the permit requirements of 40 CFR Part 270. (40 CFR Part 262.34(b) directing to 40 CFR Part 270.10)

RESPONSE:
The drums in question are still in the process of being filled in the satellite generator area next to the 90 day accumulation area.

Some confusion has occurred since there is a satellite generator area near the waste accumulation area. Chem-Tronics has a revised drum management program, O.M. 718.2. (Attachment D-1) and has also redesigned the waste yard layout. Chem-tronics is coordinating the revision of the hazardous waste yard procedures and layout with the local fire department and the Department of Health Services, (Hazardous Waste Division), (attachment A-3).

PICTURE # 06. ITEM # 06.
SUBJECT: Reference EPA Report Appendix - C, Photograph - 2.

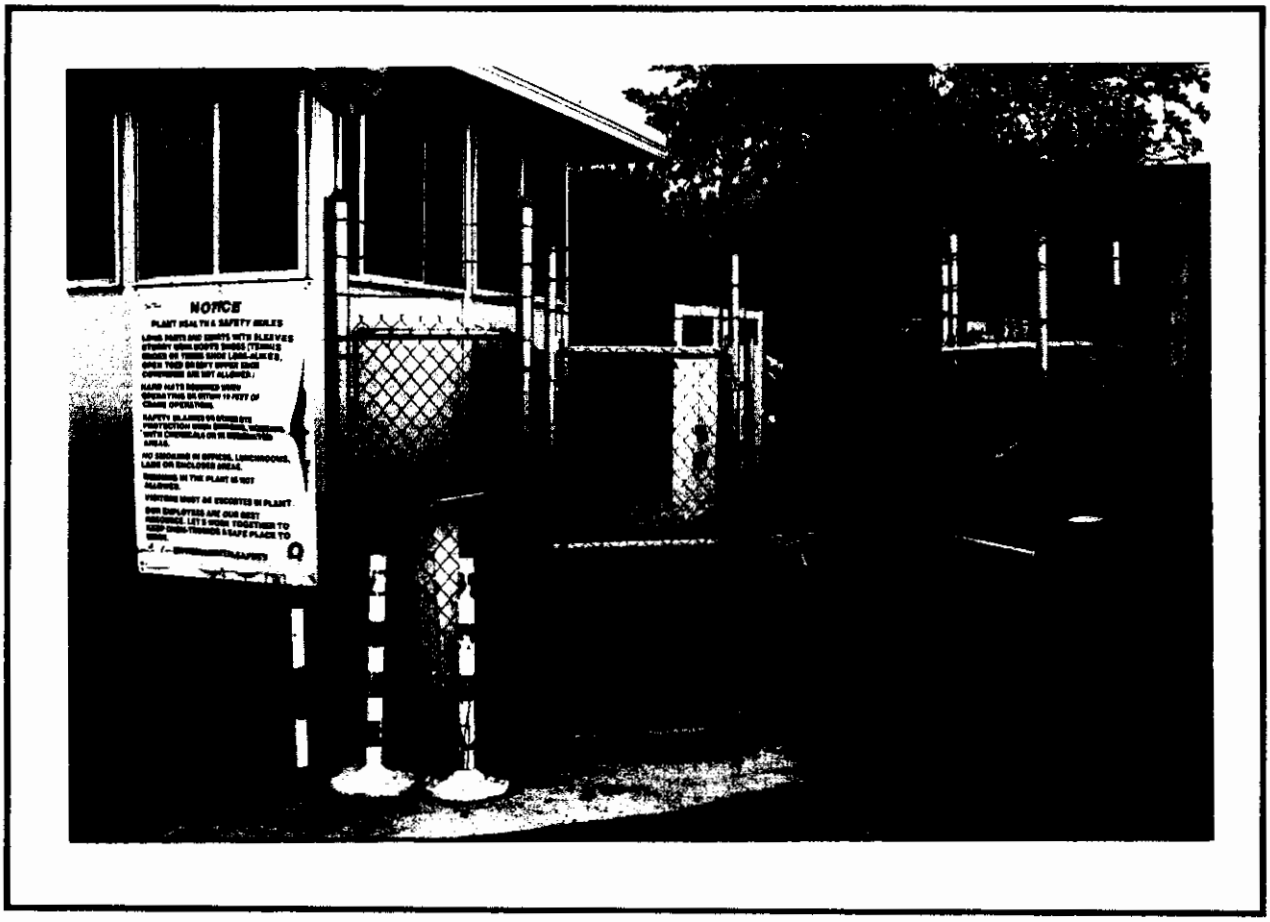
This is the adjacent satellite generation area.

7) **POTENTIAL VIOLATION:**
Spill control equipment is not readily accessible at the 90-day hazardous waste accumulation area outside of Building 4. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.32(c))

RESPONSE:
The Emergency Spill Equipment is located close enough to the accumulation yard (<100 ft see pictures). Since the waste yard is in line with chemical tanker traffic, the concern was , if the Emergency Spill Equipment was placed any closer to the waste yard , it could be in center of a tanker spill. Therefore the greater concern is a tanker spill, due to both the physical hazard of the chemicals brought in by tanker and the potential volume of a spill.

PICTURE # 07. ITEM # 07.
SUBJECT: Emergency Spill Response Equipment Location

See additional photo's submitted 12/18/90 per request during a meeting with facility representatives on 12/11/90



7) **POTENTIAL VIOLATION:** (continued)

PICTURE # 08. **ITEM #** 07. **SUBJECT:** Paragraph showing the distance from spill response equipment to 90 day accumulation area.

ATTACHMENT D-1

Chem-Tronics Operations Manual 7.8.2
Guidelines for safe handling and disposal
of hazardous waste, 6 Pages

Drum Management Plan, 3 Pages

Attachment D-1

Overview of Chem-tronics Drum Management Program

The first step as specified in Operations Manual-7.8.2 (attachment A-1) When a waste drum is needed , it is checked out of storage. At that time the drum is serialized and entered in a log along with the date of issue, type of waste to be collected in drum serial number and collection location. Also ,the Red "**Hazardous Waste**" label is affixed to the drum with the appropriate sections filled in.

RED HAZARDOUS WASTE GENERATOR LABEL

HAZARDOUS WASTE

MWO/ DISPATCH NUMBER		ACCUMULATION START DATE	
CONTENTS			
PHYSICAL STATE	HAZARDDUS PROPERTIES		
☐ LIQUID	☐ FLAMMABLE	☐ TOXIC	
☐ SOLID	☐ CORROSIVE	☐ OTHER _____	
SUPERVISOR		EXTENSION	
PLANT	BLDG	ROOM/COL	DEPT

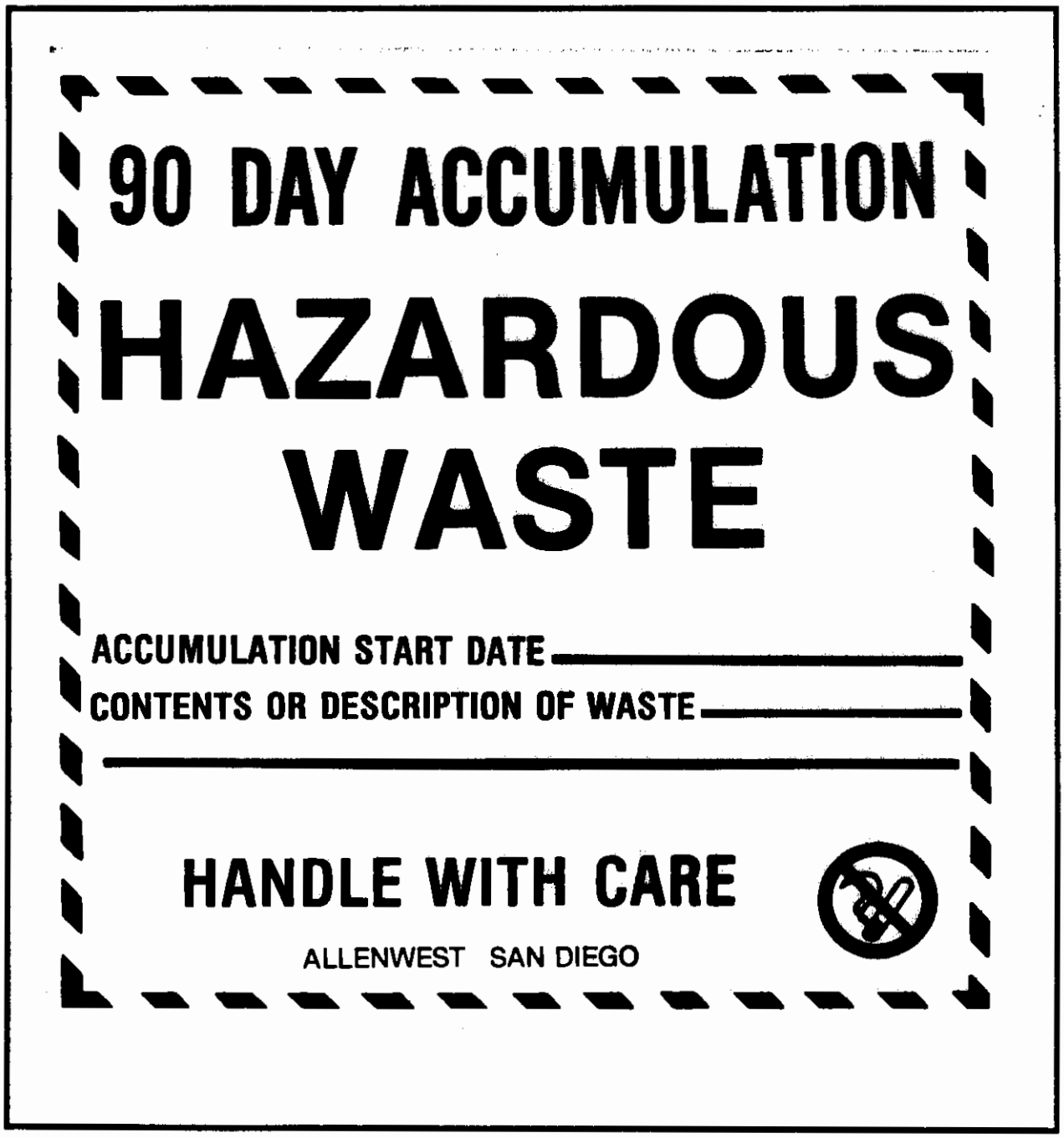
CHEM-TRONICS INC., EL CAJON, CA

HANDLE WITH CARE!

Attachment D-1

When the drum is full, it is taken to the 90 day accumulation yard. It is then logged in, and it is re-labeled with a yellow **90 Day Accumulation** label. This label has the accumulation start date and type of wastes. (see below)

YELLOW 90 DAY ACCUMULATION LABEL



Attachment D-1

Prior to shipment an **Off-Site Hazardous Waste** label is put on the drum, covering the 90 Day Accumulation Label.(see below).

YELLOW OFF SITE HAZARDOUS WASTE LABEL

HAZARDOUS WASTE

STATE AND FEDERAL LAW PROHIBITS IMPROPER DISPOSAL

IF FOUND, CONTACT THE NEAREST POLICE, OR PUBLIC SAFETY AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY OR THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES

GENERATOR INFORMATION:

NAME _____

ADDRESS _____ PHONE _____

CITY _____ STATE ____ ZIP _____

EPA ID NO. / MANIFEST DOCUMENT NO. _____ / _____

EPA WASTE NO. _____ CA WASTE NO. _____ ACCUMULATION START DATE _____

CONTENTS, COMPOSITION: _____

_____

PHYSICAL STATE: ☐ SOLID ☐ LIQUID

HAZARDOUS PROPERTIES: ☐ FLAMMABLE ☐ TOXIC ☐ CORROSIVE ☐ REACTIVITY ☐ OTHER _____

_____

_____

_____

D.O.T. PROPER SHIPPING NAME AND UN OR NA NO. WITH PREFIX

HANDLE WITH CARE!

STYLE WMCA6

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SUBJECT: GUIDELINES FOR SAFE HANDLING AND DISPOSAL OF HAZARDOUS WASTES

TABLE OF CONTENTS

REVISION RECORD

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Paul Beck, VP
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William Malone,
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Ken Ramsay, Dir.
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Harold G Burkholder
Harold Burkholder, VP
Aviation Repair

SUBJECT: GUIDELINES FOR SAFE HANDLING AND DISPOSAL OF HAZARDOUS WASTES

1. SCOPE

1.1 This manual establishes guidelines for the disposition of hazardous wastes generated by Chem-tronics departments.

2. REFERENCE DOCUMENTS

2.1 Federal, State and Local law requires that all hazardous waste be accumulated and disposed of in a safe and accountable manner. The following laws and acts apply but are not meant to be an all inclusive list.

2.1.1 Code of Federal Regulations, 40 CFR 261, "Identification and Listing of Hazardous Waste".

2.1.2 Code of Federal Regulations, 49 CFR Parts 171-179, Subchapter C "Hazardous Materials Regulations".

2.1.3 Code of Federal Regulations, 29 CFR 1910.120, "Hazardous Waste Operation & Emergency Response.

2.1.4 Title 22, California Code of Regulations, Articles 19, 20, 21, 24.

2.1.5 Clean Water Act 33-USC-1151.

2.1.6 Clean Air Act 42-USC-7401.

2.1.7 Resource Conservation and Recovery Act of 1980 42-USC-6901.

2.1.8 Superfund Amendments and Reauthorization Act of 1986.

2.2 OM 3.8.31 - Solvent Use.

2.3 OM 7.1.9 - Foot Protection

2.4 OM 7.1.10 - Eye Protection

2.5 OM 7.7.2 - Hazardous Communication Policy

3. GENERAL

3.1 The Health, Safety and Environmental Department is responsible for determining which materials are classified as hazardous and for hazardous waste disposal.

3.2 Any questions concerning hazardous waste packaging, or disposal should be directed to Environmental Health.

3.3 The supervisor of stores provides all containers for the disposal of hazardous waste. The supervisor of stores will only issue a drum after all previous labeling has been obliterated.

3.4 Hazardous waste is moved from the generator area to the waste accumulation area by designated personnel trained as Emergency Response Team members (ERT). The waste should be moved only after appropriate labeling has been applied.

3.4.1 The ERT shall have 40 hours of training per OSHA/EPA requirements.

3.5 The hazardous waste label is to be filled in with the type of waste, date when waste is first placed in the container, department number that the waste material came from, and the name and telephone extension of the area supervisor.

3.6 Any waste material not properly packaged must be corrected by the generating department prior to being moved.

3.7 Process Engineering shall determine if a process tank solution is in need of disposal.

4. DEFINITIONS

4.1 Hazardous Waste - Any waste material that is toxic, poisonous, caustic, corrosive, oxidizing; flammable or explosive; irritating, anesthetic, or strongly sensitizing that can cause substantial injury.

4.2 Extremely Hazardous Waste - Any hazardous waste material for which exposure to humans may likely result in death, disabling personal injury, or illness.

4.3 Hazardous Waste Accumulation Site - The designated area at each facility used to accumulate containers of hazardous waste until disposal.

5. SAFETY PROCEDURES

5.1 Appropriate gloves and safety glasses shall be worn when working with waste. (See OM 7.1.9 - Foot Protection and OM 7.1.10 - Eye Protection).

5.2 Additional protective gear such as respirators, aprons, and dust masks may be required when working with hazardous materials. If there are any questions, contact your supervisor or the Health, Safety and Environmental Department.

6. ON-SITE MOVEMENT OF WASTE

6.1 Generating Department shall:

6.1.1 Place appropriate hazardous waste label on container.

6.1.2 Fill carboys and small containers no higher than four inches from the top.

6.1.3 Ensure that 55-gallon drums are filled with no more than 50 gallons of material.

6.1.4 Place material in undamaged leak-tight containers that show no indication of spillage. Identify the contents of each container and equip them with a tight-fitting closure to minimize the escape of vapors.

6.1.5 When a container is full, contact Production Control to move the drum to the waste accumulation area.

6.2 Health, Safety and Environmental Department (HSE) shall:

6.2.1 Prepare an approved hazardous waste manifest.

6.2.2 Schedule disposal of the hazardous waste to ensure minimum interference with Production Control.

7. TRAINING

7.1 Area Management shall be responsible for training their employees on the above guidelines. (See Attachment 1 - Hazardous Training Handout).

7.2 Training shall include a thorough understanding of information on:

- MSDS for each of the materials handled,
- recognition of emergency procedures in-house (Ref. 29CFR 1910, 120),
- question and answer session to ensure hazard communication policy information is understood e.g. definition of hazardous waste; labeling hazardous waste; handling hazardous waste.

Attachment 1

Hazardous Training Handout

1. HAZARDOUS WASTE

1.1 "Hazardous Waste" is any chemical waste that is toxic, ignitable, reactive or corrosive, or which is listed by the state or federal government as being "hazardous". A "waste" is any material that is no longer needed and which can no longer be used by Chem-tronics.

1.2 At Chem-tronics, materials that are unused and which are packaged in unopened containers are not classified as hazardous waste until an attempt has been made to sell the materials through salvage.

1.3 Once material has been classified as hazardous waste, Chem-tronics Health, Safety and Environmental Dept. is responsible for safe and legal disposal. Questions about handling or classification of waste materials may be directed to HSE, Hazardous Waste Technician, Or Environment Health Engineer.

2. LABELING HAZARDOUS WASTE CONTAINERS

2.1 ALL hazardous waste at Chem-tronics must carry (a red and white) in-plant Hazardous Waste label. This label is filled out by the person who first places material into the container (drum, can, tank, etc.) used to hold the waste. Extra labels may be ordered from HSE, x5119, or from the supervisor of stores where the empty drum is received.

2.2 These labels must be filled out accurately and completely with the following information:

2.2.1 FILL START DATE - the date waste first entered the container.

2.2.2 CONTENTS - a description of what is in the drum.

2.2.3 PHYSICAL STATE - is the waste a liquid or a solid?

2.2.4 HAZARDOUS PROPERTIES - a notation of why the waste is hazardous. For help with this item, call at x5119.

2.2.5 SUPERVISORY EXTENSIONS - the person responsible for the waste while it is being collected.

2.2.6 BLDG., DEPT. - information about the location of waste.

3. GUIDELINES FOR HANDLING HAZARDOUS WASTE

3.1 Chem-tronics HSE has adopted the following standards for in-plant handling of hazardous wastes:

3.1.1 Per Safety OM's, the person generating a hazardous waste is responsible for proper packaging of the material. Questions regarding packaging may be addressed to HSE, x5119.

3.1.2 According to California state law, hazardous waste may be collected in a 55 gallon drum in the generating area for up to one year, or until the 55 gallon (for example, waste oil) drum is full. Pickup for any hazardous waste is initiated by calling Production Control.

3.1.3 The Supervisor of Stores shall provide reconditioned drums for the packaging of hazardous wastes.

3.1.4 Liquid wastes must be packaged in closed-top containers, solids in open-top containers. HSE will NOT dispose of waste liquids in open topped containers.

CONTINGENCY PLAN

8) **POTENTIAL VIOLATION:**

When the contingency plan was implemented, the operating record did not include the date, time, or details of each incident that required implementation of the contingency plan. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.56(j))

RESPONSE:

The operating record did, in fact, includeed all the information on the incident. This item was brought to managements attention after the inspection team left the premises. A copy of the account is attached. (Attachment C-1)

9) **POTENTIAL VIOLATION:**

When the contingency plan was implemented, Chem-Tronics did not submit a written report to the EPA Regional Administrator within 15 days after the incident. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.77(a))

RESPONSE:

After the contingency plan was implemented the report was timely sent to the appropriate state agency. We are not sure if it was also forwarded to the federal agency. We will contact the EPA regional Administrator's office to find out if the report has since been received or if another copy is needed. A copy of the report is attached, (Attachment C-2).

10) **POTENTIAL VIOLATION:**

The contingency plan does not list all emergency equipment, including the location and physical description of each item on the list and a brief outline of its capability. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.52(e))

RESPONSE:

The contingency plan will be revised to also include a physical description and brief outline of its capabilities. The appropriate page is attached from the Contingency Plan.(Attachment C-3)

11) **POTENTIAL VIOLATION:**

The contingency plan was not revised when the contingency plan has failed in an emergency. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.34(54)(b))

RESPONSE:

It was unclear from the inspectors report what emergency plan failure is being referenced, however when the plan was implemented to respond to a caustic spill on 4/9/89 it worked very well, and we have no reason to believe that it failed.

12) POTENTIAL VIOLATION:

The contingency plan does not describe the actions personnel must take to comply with 40 CFR Parts 265.51 and 265.56 responses. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.52(e))

RESPONSE:

The appropriate sections pertaining to emergency response actions are to be taken from the existing Chem-Tronics EMERGENCY RESPONSE PLAN, and will be cross referenced in the Business/Contingency Plan (OSHA 29 CFR 1910.120(8)(l)(ii)) . (Attachment C-5).

13) POTENTIAL VIOLATION:

During a titanium dust fire at Chem-Tronics, the El Cajon Fire Department noted that the emergency coordinator did not take all reasonable measures to minimize spreading of the fire. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.56(e))

RESPONSE:

The incident referenced occurred on July 4, 1990 at 12:30 am, when the Emergency response Coordinator was absent due to the holiday. This was initially responded to by a Chem-tronic's Vice President untrained in emergency procedures, who inadvertently used the incorrect fire extinguishant and incorrect respirator.The emergency response measures were revised to include the new Class-D fire extinguishers, and layout. (Attachment C-6 Class-D fire extinguisher Layout)

ATTACHMENT C-1

Operating Record From 4/9/89

4. page

CHEMTRONICS

CHEMICAL SPILLS HAZMAT ACTIVATION

DATE: 4 / 9 / 89 TIME: _____ am, (pm) SHIFT: 2

NAME OF CALLER Phil Harris EMP NO. 2371
CALLER LOCATION Gate # 7.

LOCATION OF INCIDENT. North east corner of bld 4

NATURE OF INCIDENT. Spill from roof.

INJURIES SUSTAINED. YES / (NO) HOW MANY _____

NOTIFICATIONS

SAFETY X SECURITY X FIRE DEPT ____ MEDIVAC ____ HAZMAT X

TIME RESPONDED 3:43 am. pm. TIME ON SCENE 3:46 am. pm.

HAZMAT

ON SCENE COMMANDER David Juester EMP NO. 1476
PRINT NAME.

TEAM MEMBERS

	R. Komm	EMP NO. ____
Joe Mckinney 3024	A. Smith	EMP NO. 2706
Steve Fife	Phil Harris	EMP NO. 2371
Gary Moore		
Steve Sanfen	David Pirello	EMP NO. ____
Louis Walker	Bob Rattazzi	2196

CONTAMINATION

MATERIAL SPILLED Sodium Caustic TOXIC X FLAMMABLE ____

QUANTITY / RADIUS 20 Gallons

HIGH RISK ____ LOW RISK X TIME SECURED 19:30 am. pm.

SPILL RESPONSE INFORMATION

PROTECTIVE GEAR USED

GENERAL PROTECTION LEVEL: LEVEL (A) LEVEL (B) LEVEL (C) LEVEL (D)

BREATHING PROTECTION REQUIRED: YES ___ NO X TYPE: _____

SITE INFORMATION

INDOORS: YES ___ NO X ENVIROMENTAL THREATS: YES TYPE:

STORM DRAINS X

CORDONS: YES ___ NO X SOIL _____

CREEK X

VICTIMS / PERSONNEL CONTAMINATIONS

PRINT NAME	EMP #	PRINT NAME	EMP #

DAMAGE REPORT

PRIVATE PROPERTY: ~~X~~ COMPANY PROPERTY: ____ PUBLIC PROPERTY: ✓

DETAILS OF DAMAGE: Approx 5 gallons of caustic liquid spilled in Forester creek. Pumped out, after being contained, by both Chemtronics personnel and American Processing Company personnel.

ADDITIONAL INFO / COMMENTS

Spill came from the roof of Bld. 4. and ran into the canal behind Bld 4 and the out into the creek that turned white. There was some spill on the roof that remained after they stopped the drain. Both spills were being cleaned up when I left the site. If response team could hear the pager they might have been there in time to stop the spill from reaching the creek (yes) California fish and game was notified

of alarm.

Cleanup completed by 2000.

State of California

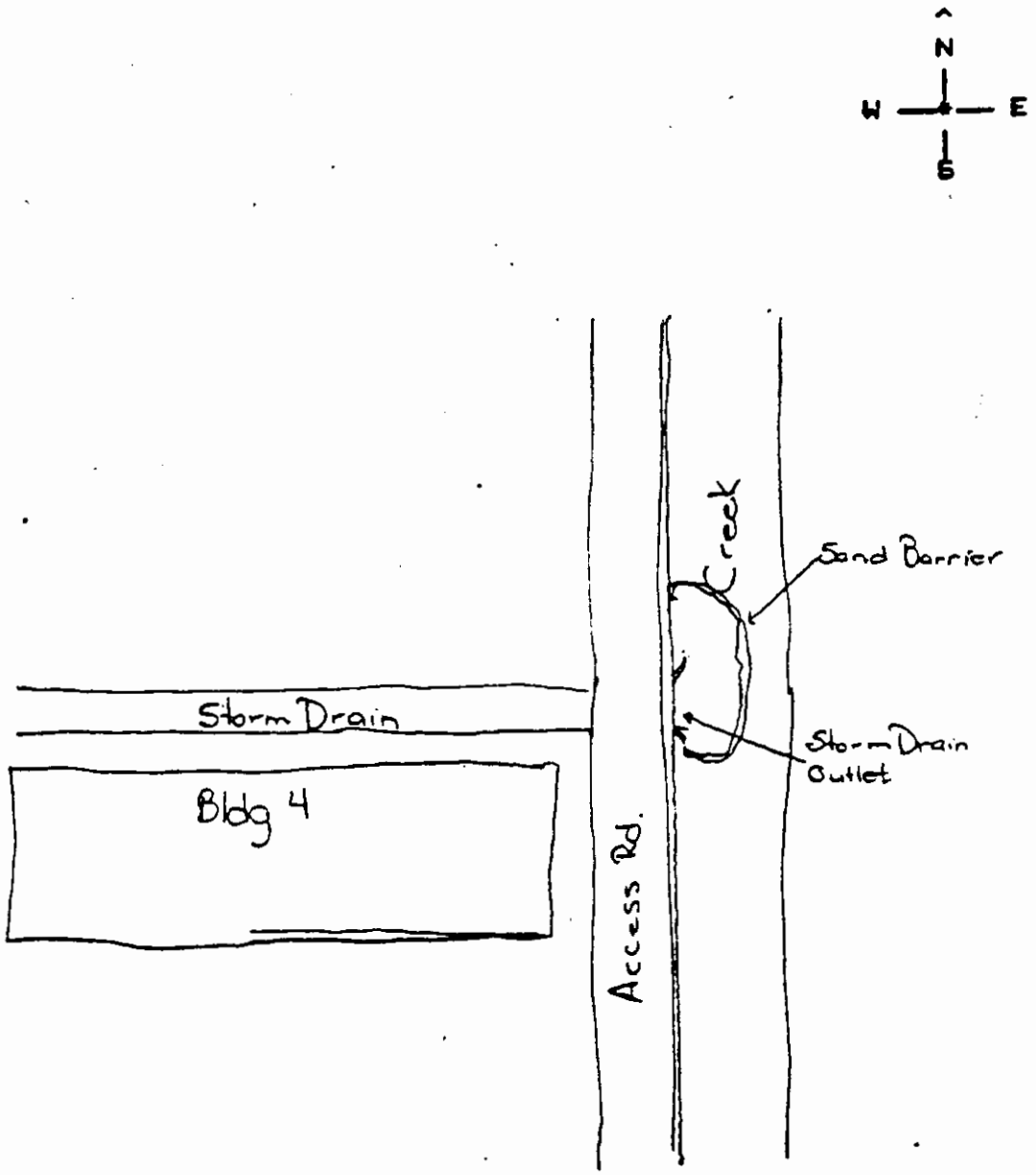
Department of Fish and Game
Wildlife Protection
1350 Front Street
San Diego, CA 92101

Mark T. Crossland
Game Warden

(619) 237-7311

SPILL RESPONSE DIAGRAM

- SKETCH THE INCIDENT SCENE TO INCLUDE CORDONS / ZONES



TO BE COMPLETED BY ON SCENE SECURITY OFFICER

Tom Martin	025711	April 10, 1989	1930
SECURITY OFFICER	EMP #	DATE	TIME

ATTACHMENT C-2

Spill Report From 4/9/89

1. pages

Date: 4/10/89
Report on Spill.

At 3:30 p.m. I was coming back to the office from delivering monthly management safety meeting. When I noticed that there was water coming from drain (or a substance that appeared to be water) as I checked further into this substance I found it to be caustic at a pH of 14.0. From that point I immediately dammed the area from contamination to creek, went and found the source, stopping the source, went to the point of clean up. In that activating the emergency response team.

People that responded and helped clean up were.

Advisor: Mike Doering
Commander: David Ivester
Security: Bill Hoover/ Tom Martin

Primary Personnel.

Allen Smith	Lewis Walker
Richard Kamm	Joe McKiny
Dave Pirillo	Bob Rattazzi
Phil Harris	Gary Moore
George Ortega	Steve Sanfer
Mike Stone	Anthony Salgado

cc: Jim Legler
John Linehan
Paul Beck
David Ferguson

ATTACHMENT C-3

Chemical Spill Clean Up Materials

from Chem-tronics Contingency Plan

(Revision will be cross referenced to C-4)

1 pages

HAZARDOUS SPILL CLEAN UP MATERIALS

The Chem-tronic's Emergency Response Team responds to and contains all hazardous material spills. A hazardous material response locker is located at the security gate at each plant location. Emergency Spill Response lockers contain the following equipment and materials:

Spill containment and neutralization is performed by the emergency response team. Subsequent spill clean up is performed by the Maintenance Department. The Maintenance Department has the following spill equipment and materials:

Emergency Spill Response EQUIPMENT / MATERIAL

Acid brooms

Level B & C Chemical suits
- B-Sigels suits
- C-Tyvex suits
- C-Saranex suits

Positive pressure breathing apparatus

Standard air bio-paks

Fire Department barrier tape

A-2 nylon rope

Various Neutralizing: Acid & Caustic Materials

Various absorbent materials:

- Safe-Step
- Plug and Dike
- Neutrasorb

Inflatable storm drain plugs

MAINTENANCE DEPARTMENT: EQUIPMENT / MATERIAL

Acid Brooms

Aluminum Shovels

Level C - Chemical suits, TYVEK, SIJAL

Gloves, Shoe Covers

Goggles, Full Face Shields

Various Neutralizing: Acid & Caustic Materials

Various absorbent materials:

- Plug and Dike
- Neutrasorb

ATTACHMENT C-4

Spill Resonse Sections from the

OSHA EMERGENCY RESPONSE PLAN

(This information will be cross referenced to C-3)

50 pages

EMERGENCY ACTION-SPILL

1. Don't panic.
2. EC notified immediately. Assess material involved, how much, wind direction, and flow direction.
3. Treat burn victim with first aid, transfer to Grossmont Hospital, have Grossmont notified that HF burn victim is on the way. Send copy of HF treatment instructions with driver or victim.
4. Notify in-house response crew to don Level "A" protection; survivor pack, OSHA response suits (Saranex), boots, neoprene gloves.
5. If practical and safe, begin rinsing spill with 1" water line from upwind position until Level "A" crew is ready.
6. Send Level "B" person with Sensidyne fume monitor to a distant downwind area to determine how far fumes are traveling. Send two way radio.
7. Call Fire Department and Police for assistance in stopping traffic across Marshall and additional water spray.
8. Evacuate chem-mill building since HF fumes are being sucked into building by 100,000 CFM exhaust fans. Evacuate to staging area #2 on plot plan map. Evacuation to be coordinated by supervisor or department.
9. Call manufacturing facility across Marshall to tell them HF fumes are headed their direction and to close all doors and windows (facility is about 200 ft. away).
10. Level "A" team dike the storm drain with "Spill Dike" absorbent tubes. Place pre-cut PVC sheet over top of drain and seal with soda ash.
11. Continue flooding leaking drums with water washing as much as possible into waste treatment vault. Level "A" personnel.
12. Shut all doors to building to keep fumes out.
13. Turn spray system on in containment vault to wash down fumes.
14. Start pumping vault into treatment tank #1 for

neutralization with liquid caustic soda.

15. Start Wilden pump with 1" line to pump HF from diked area around storm drain into treatment tanks.
16. Stay in contact with fume detector person to assess off-site control with Police and Fire Department.
17. Neutralize diluted HF with bags of soda ash to stop fuming.
18. Safely turn nearly empty HF drums on their side to stop leaking. Level "A" required.
19. When fumes are down to a safe level let police and fire department know it is o.k. to allow traffic back and employee back into the workplace.
20. Shovel all neutralized materials into hazardous waste bin for disposal.
21. Carefully put spill dike absorbent tubes into 7,500 gallon tank of water for diluting. Add 50 gallons of caustic soda to neutralize. Allow to soak 24 hrs. Discard into hazardous waste bin.
22. Decontaminate all suits, boots, gloves, shovels, etc. with plenty of water (drain into sump).
23. Write report.
24. Call all appropriate agencies with details of incident.

ADAPTATION OF THE INCIDENT COMMAND SYSTEM TO THE INDUSTRIAL EMERGENCY RESPONSE TEAM

by

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INTRODUCTION

OSHA has mandated that the Incident Command System (ICS) be the organizational structure for emergency response to chemical spills[1]. The ICS is specifically mentioned in the section entitled "*Procedures for handling off-site emergency incidents*"[2]. The term "off-site", is is defined as off-site of a hazardous waste site, and therefore includes both incidents during transport and incidents at industrial facilities. The regulations state that the senior "*company*" officer who responds to the scene of the incident will establish the Incident Command System and that all emergency responders and their communications shall be coordinated and controlled through the individual in charge of the ICS.

Although this regulation is specifically directed at persons responding to chemical spills, the ICS is equally

---

[1] 29 Code of Federal Regulations 1910.120

[2] 1910.120 (L)(3)(ii)

applicable to any other workplace emergency response. While most of the following discussion will be directed towards spill teams, all ERT response activities can be structured around the Incident Command System. In this article, I will demonstrate how to adapt the ICS to the the industrial workplace and how to implement the procedures described, with specific examples.

OSHA mandated the usage of the ICS for two important reasons: first, the ICS has been in use for many years and has a well-established history and documentation[3]; and second, the ICS is the standard command system for fire departments in the United States. As fire departments have become the primary response unit for most emergencies, use of the ICS by an industrial Emergency Response Team (ERT) will enhance their ability to interact with them.

INCIDENT COMMAND SYSTEM

The ICS was developed in response to the need for a unified command system that would enable various companies of emergency responders to function together as a single unit. For example, the massive Yellowstone forest fires in 1988 required the manpower of many fire companies from several states, to control. Similarly the explosion and

[3] To obtain ICS documentation contact the Boise Interagency Fire Center, located at 3905 Vista Avenue, Boise, Idaho 83705. A list of available ICS documents are contained in the National Fire Equipment System Catalog, Part 2: Publications.

resulting fire with causalities which occurred in Henderson Nevada in 1988 required the coordinated activities of many different types of response personnel. Using the ICS, the response to incidents such as these could now be coordinated by a single person within a unified command structure.

To illustrate how this works, lets examine what happens during a multiple alarm fire. The First-Due Unit of the fire department arrives on the scene, establishes a command post, assesses the situation and sets up attack positions. The Unit's Captain will function as the Incident Commander (IC), directing all actions of his team members in fighting the fire.

As other units arrive on the scene, their actions must be integrated into the overall attack plan. Incoming units will assume various functions under the control of the IC, being directed by their Unit Captains. At some point, the original Incident Commander, may transfer authority to a higher level commander, perhaps a Chief. The Chief has now become the Incident Commander, and has overall control over the incident.

The same procedure is used when the Fire Units are deactivated. When the fire is under control and Units may be released, the current IC may return control back to the First-Due Unit's Captain, who was the original IC.

At all times during the incident, overall control is maintained at the IC level. Everyone knows who is in charge, and the various Fire Units are integrated into a single team.

There are many specific team and individual roles defined under the ICS that may or may not be utilized during a fire or emergency response. The ICS is intended to be flexible in its application to all of the various emergency response organizations. For industrial ERT's there will be only a few ICS team roles that will be employed. Each role or team position has defined duties and responsibilities which must be adapted to a facility response team.

INDUSTRIAL ERT's AND HAZMAT TEAMS

An industrial Emergency Response Team (ERT) is a group of people within a facility that has received specialized training in the response to emergencies. Initially industrial ERT's were formed as fire brigades and first-aid teams. However, as industry diversified and expanded into high technology fields, the demands on industrial ERT's changed as well.

A fully operational industrial ERT is now expected to respond to all reasonably foreseeable incidents at their facility. This will include not only fire and medical emergencies but also chemical or gas releases, bomb

threats, civil disobedience, severe weather and in many areas, earthquakes. They will also form the basis of the recovery team during restoration of the facility after an emergency.

A HAZMAT Team is a term used in the 1910.120 regulation to describe a group of employees who have been designated by their employer "...to plug, patch or otherwise temporarily control or stop leaks from containers which hold hazardous substances...". If an ERT has any of these duties then it is also a HAZMAT Team as defined by the regulation. For the purposes of this article, the terms ERT and HAZMAT Team will be used interchangeably to indicate those persons who would to respond to a chemical spill without regard to the fact that an ERT will usually have much broader responsibilities.

The expanding role of ERT's has greatly increased both the technical expertise and flexibility they require. This in turn has created a need for a more fully integrated team command system. The Incident Command System meets this need and at the same time provides for the coordination needed between the ERT and their municipal emergency responders.

When adapting the ICS to an industrial ERT, it is important to realize that some elements of the ICS may not be appropriate or relevant to an industrial team. Second,

an industrial ERT is similar in structure to a volunteer fire department; the members have other primary duties from which they are called during a response. As such, all industrial team structures will involve horizontal (team) and vertical (corporate) components within their facility. Both components can be integrated into the ICS quite successfully and each will be examined in detail in the remainder of this article.

ICS TEAM STRUCTURE

There are several ICS Team positions, with defined roles and responsibilities, applicable to industrial Emergency Response Teams. These include the following:

INCIDENT COMMANDER

SAFETY OFFICER

PRIMARY TEAM

BACK-UP TEAM

STRIKE TEAM

LOGISTICS TEAM

The duties of each ICS position for an industrial ERT responding to a chemical incident are clearly defined. The roles must be understood by all ERT members.

INCIDENT COMMANDER: The Incident Commander, or IC, is in-charge of overall incident response. The IC will assess the incident, establish a command post, issue orders as required to protect human health safety, and mitigate the

incident. When command of an incident is transferred to an incoming Incident Commander, the current IC will provide a complete report on the status of the incident. The new Incident Commander will only assume command after the overall situation has been reviewed and sufficient information has been made available to make appropriate decisions.

The Incident Commander has, as a minimum, the following responsibilities:

1) Assess situation;
2) Activate elements of the team;
3) Conduct briefings;
4) Approve and implement incident action plan;
5) Coordinate activities;
6) Manage incident operations;
7) Approve requests for release of resources;
8) Approve requests for additional resources;
9) Authorize release of information to the media;
10) Approve decontamination plan;
11) Approve disposal plan;
12) Approve demobilization plan;
13) Release resources and supplies; and
14) Release facility for resumption of operations.

SAFETY OFFICER: This person is responsible for the overall safety of team members during an incident. He or she reports directly to the Incident Commander concerning any responder safety issues which may arise. The Safety Officer will usually remain with the IC, at the command post, during the duration of the incident.

The Safety Officer has, as a minimum, the following responsibilities:

1) Provide incident commander with initial incident risk assessment evaluation;
2) Define the potential team hazards;
3) Assist the incident commander in selection of team personal protective equipment;
4) Survey and confirm proper donning of personal protective equipment;
5) Maintain safety officer's team log during duration of incident;
6) Maintain communication with team leaders as to status of team members;
7) Recommend personnel rotation to incident commanders appropriate for level of team member fatigue;
8) Conduct ongoing risk assessments as incident expands or comes under control;
9) Advise incident commander to required modifications in personal protective equipment as needed; and,
10) Prior to release of area, assist incident commander in safety evaluation.

PRIMARY TEAM: The primary team will consist of the personnel doing the "hands-on" clean-up of the spill. These people will be committed to the "hot zone" and will require on-going support to accomplish their task. A primary team may have no less than two persons committed to the hazardous area.

BACK-UP TEAM: The back-up team supports the primary team by assisting in transport of supplies across the hot line, providing back-up fire protection, assisting in decontamination of equipment and personnel, and being immediately available for emergency rescue of primary team members if required.

STRIKE TEAM: Strike Teams are any combination of similar resources assembled to perform tasks assigned to

the Strike Team by the Incident Commander. The most common Strike Team that will be utilized by an ERT will consist of the members of the Primary and Back-Up Teams.

STRIKE TEAM LEADER: The elements of a Strike Team must have common communications and a leader. The Strike Team Leader will report directly to the Incident Commander.

The Strike Team Leader has, as a minimum, the following responsibilities:

1) Obtain briefing from incident commander or group supervisor;
2) Review strike team assignment with subordinates;
3) Monitor work progress and make changes when necessary;
4) Determine need for assistance on assigned task;
5) Coordinate activities with adjacent strike team forces;
6) Submit situation and resource reports to incident commander;
7) Report special events which may effect incident risk assessment;
8) Request service/support; and,
9) Report status and location changes.

LOGISTICS TEAM: The Logistics Team functions to provide any required logistic support requested by the Incident Commander. This will mainly consist of obtaining tools, clean-up materials and personal protective equipment needed for the response. The Logistics Team is the basic "gofer" unit of the HAZMAT Team and may be call upon to do anything as the need arises.

LOGISTICS TEAM LEADER: The Logistics Team Leader participates in development of the Incident Action Plan and

supervises members of the Logistics Team.

The Logistics Team Leader has, as a minimum, the following responsibilities:

1) Obtain briefing from incident commander;
2) Plan organization of logistics section;
3) Assign work location and tasks to logistics team members;
4) Identify service and support requirements for planned and expected operations;
5) Advise incident commander on current service and support capabilities;
6) Coordinate and process requests for additional resources;
7) Approve requests for release of resources;
8) Submit report on amount of resources consumed during incident management;
9) Submit reorder forms to replace consumed materials;
10) Arrange for repair or replacement of damaged equipment; and,
11) Restock storage area.

Professional emergency responders have the ability to assign team roles to specific individuals for relatively long periods of time. This allows the individual to become increasing proficient at his role. On an industrial ERT, where members may have to serve in several positions, it is vital that key team personnel be familiar with the various team roles and responsibilities.

The ERT must also be spatially organized at the incident. Figure 1 illustrates how the team organization is related to function. The Incident Commander remains at the command post in the secure zone where he can maintain an overview of the incident and communicate with his

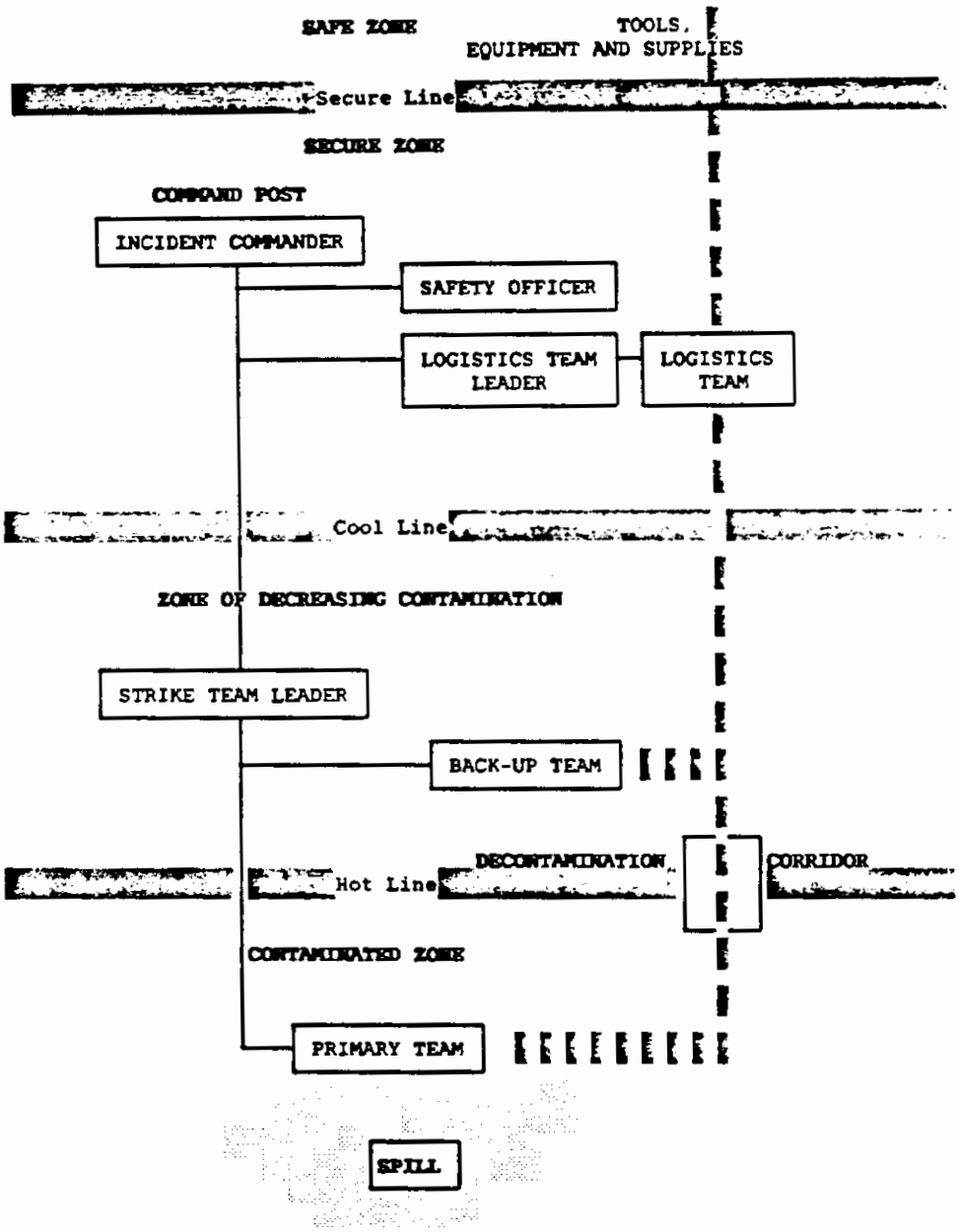
of command. When command is transferred, the ICS structure can be used to communicate the information along the chain of command.

SUMMARY

The Incident Command System provides the necessary structure needed by an industrial Emergency Response Team, both in terms of team and company organization. Application of the ICS to the special requirements of an industrial facility requires an understanding of how the ICS operates and how to integrate it into your ERT.

Team roles and responsibilities must be clearly defined and understood by all team members to enhance team actions and to reduce confusion during an actual emergency. A Team's lines of authority must be as short and direct as possible to ensure appropriate actions can be taken quickly when an emergency occurs.

FIGURE 1



The large solid lines demarcate the spill zones. The large dotted lines trace the flow of materials into and out of the spill scene. The solid thin lines show the flow of authority which originates with the Incident Commander.

FIGURE 2

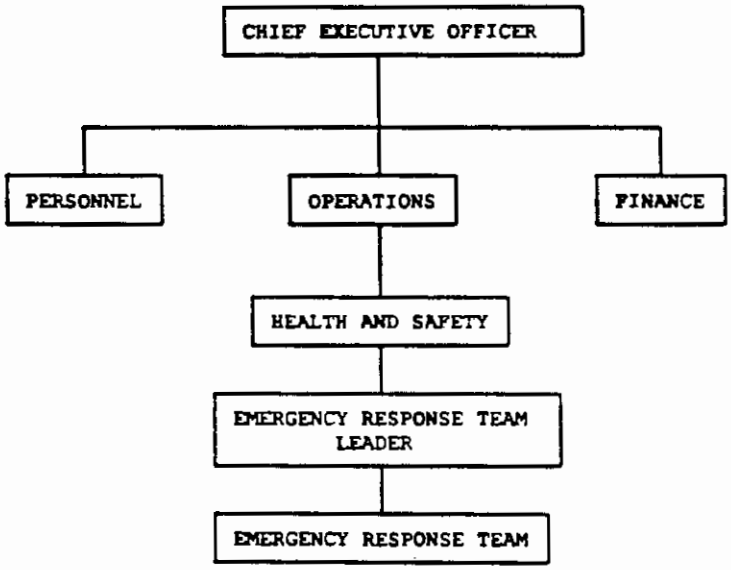
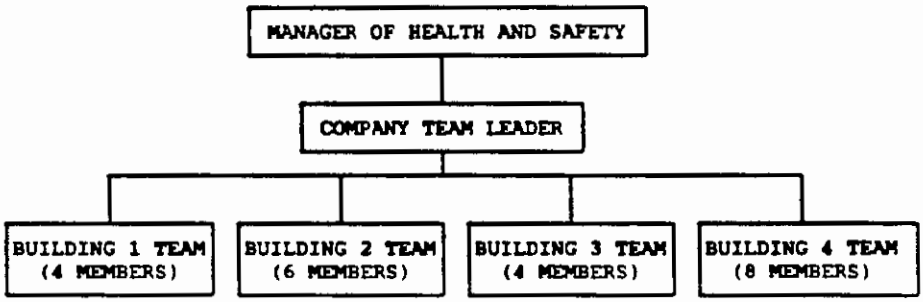

CHIEF EXECUTIVE OFFICER
PERSONNEL
OPERATIONS
FINANCE
HEALTH AND SAFETY
EMERGENCY RESPONSE TEAM LEADER
EMERGENCY RESPONSE TEAM

FIGURE 3


MANAGER OF HEALTH AND SAFETY
COMPANY TEAM LEADER
BUILDING 1 TEAM (4 MEMBERS)
BUILDING 2 TEAM (6 MEMBERS)
BUILDING 3 TEAM (4 MEMBERS)
BUILDING 4 TEAM (8 MEMBERS)

SUMMARY and INTERPRETATION

HAZARDOUS WASTE OPERATION and EMERGENCY RESPONSE

Federal Register, March 6, 1989

As Applicable to CHEM-TRONICS

March 6, 1989, OSHA published a Final Rule (FR 54 pp 9294, et seq.) with direct impact on all chemical emergency response teams. This review will describe this new regulation and its impact on company emergency response teams. CSA will then offer its opinion on procedures by which a company can come into full compliance.

The rule applies to three groups of employees: those working at various forms of CERCLA sites or equivalent State sites; RCRA hazardous waste facilities (Treatment, Storage,and Disposal {and Recycling} Facilities - TSD facilities); and all chemical emergency response teams, regardless of location of the hazard. A specific exception applies, however, to large or small quantity hazardous waste generators. This exception reduces the training and preparedness burden imposed by the entire regulation.

Effective date: This Final Rule becomes effective on March 6, 1990.

SUMMARY

a) Scope, application, and definitions. The following employers & employees are covered by this standard:

1. Clean-up operations required by any government body at any uncontrolled hazardous waste site.

2. Corrective actions involving clean-up operations at RCRA sites.

3. Voluntary clean-up operations involving hazardous waste sites recognized by any governmental authority.

4. Operations involving hazardous wastes that are conducted at TSD facilities.

5. Emergency response operations for releases of, or substantial threats of, releases of hazardous substances, regardless of the location of the hazard.

Application: Operations other than TSDF's (a4, above) or emergency response (a5, above) must comply with all paragraphs of this regulation, except [(p), following] and [(q), following]. TSDF operations must comply with paragraph (p). Except as noted below, emergency response operations must comply with paragraph (q).

Exceptions: Large quantity generators and small quantity generators who have personnel who respond to releases of, or substantial threats of, releases of hazardous substances for their [RCRA] workplaces only, must comply with only paragraph (p)(8). If such facilities do not have personnel who respond to chemical spills, they are completely exempt from this regulation.

(b) **Safety & Health Program** - each employer must have a written safety & health program. The program must include:

A. An organizational structure;
B. A comprehensive work-plan;
C. A site-specific safety and health plan;
D. A safety and health training program;
E. A medical surveillance program;
F. A employers standard operating procedures for safety and health; and
G. Any necessary interface between general program and site specific activities.

The regulation is very specific about the content of each element of the Safety and Health Program. In addition, the program must address proper excavation procedures and control of contractors and subcontractors. Finally, the written program must be made available to everyone with access to the site or regulatory authority over the site.

(c) **Site Characterization** - a complete written characterization of hazardous waste sites must be performed. OSHA is very specific about the content of the Site Characterization.

(d) **Site Control** - access to the site must be controlled to minimize employee exposure. Again, OSHA is very specific about the content of the site control plan.

(e) **Training** - Initial and/or refresher training must be provided before employees engage in any activities on-site.

The minimum elements of the training program shall include:

A. Names of personnel and alternates responsible for site safety and health;
B. Safety, health, and other hazards present on site;
C. Use of personal protective equipment;
D. Work practices to use to minimize risk;
E. Safe use of engineering controls and equipment on site;
F. Medical surveillance requirements;
G. Decontamination Procedures;
H. Emergency response requirements;
I. Confined space entry procedures; and
J. Spill containment program.

Initial Training

General Site Workers: For those routinely exposed to the various hazards at the site - a minimum of 40 hours of instruction off-site plus a minimum of three days actual field experience under the supervision of a trained, experienced supervisor.

Occasional Workers: For those who work on the site only occasionally for a specific limited task - a minimum of 24 hours of instruction off-site plus a minimum of one day actual field experience under the supervision of a trained, experienced supervisor. If these workers move into the category of "General Site Workers", their training must be upgraded appropriately.

Management and Supervisor Training: For on-site managers and supervisors who are responsible for the safety and health of others - a minimum of 40 hours of instruction off-site plus a minimum of three days actual field experience under the supervision of a trained, experienced supervisor, plus at least eight additional hours of management related training.

Refresher Training

Employees required to receive initial training must receive eight hours, annually, of relevant refresher training.

(f) **Medical Surveillance** - must be provided to all potentially exposed employees .
(g) **Engineering Controls, Work Practices, and Personal**

Protective Equipment - must be implemented or provided to protect employees from exposure to hazards or hazardous substances.

(h) **Monitoring** - air and other monitoring must be performed initially and as needed to characterize potential hazards.

(i) **Informational Program** - Employees, contractors, and subcontractors shall be informed of the degree and nature of safety and health hazards specific to the work site.

(j) **Handling Drums and Containers** - Specific requirements are imposed for handling contaminated soils and hazardous substances, as well as for drums, tanks, and other containers.

(k) **Decontamination** - procedures shall be developed and implemented to provide for thorough decontamination.

(l) **Emergency Response by Employees at Uncontrolled Sites** - This section defines the specific requirements of the site emergency response plan.

(m) **Illumination** - sufficient illumination must be provided to allow for safe work practices.

(n) **Sanitation** - at temporary work places. OSHA implements specific requirements for potable water, non-potable water, food handling, sleeping quarters, and toilet facilities.

(o) **New Technology Programs** - The employer must make certain that employee safety and health is maintained as new technologies and equipment are introduced into the site management program. New technologies for the suppression of toxic vapors or for spill control must be evaluated by the employer or a representative prior to being introduced to the site. Such evaluations must be made available, upon request, to OSHA.

(p) **Certain Operations Conducted Under RCRA:** TSD facilities must comply with this paragraph. Compliance shall include:

1. A written Safety and Health program
2. Compliance with the Hazard Communication Standard
3. Medical surveillance
4. Decontamination program
5. New technology program

6. Material handling program
7. Training program

New Employees - a minimum of 24 hours of instruction off-site and 8 hours of annual refresher training.

Current Employees - Documentation showing equivalent training to that specified for a new employee is acceptable.

8. Emergency response program - a full emergency response program, including a written emergency response plan plus appropriate training is required. The written plan can incorporate by reference any written documentation included in TSDF permits. The Emergency Response Plan shall include the following elements:

   A. Planning & Coordination
   B. Lines of Authority, Roles, & Communications
   C. Emergency Recognition & Prevention
   D. Safe Distances & Places of Refuge
   E. Site Security & Control
   F. Evacuation Routes and Procedures
   G. Decontamination Procedures
   H. Emergency Medical Treatment & First-aid
   I. Emergency Alerting & Response
   J. Critique & Follow-up
   K. PPE & Equipment

Training - Employees need to be trained prior to being required to respond to a real emergency. The training must be to a level of competence to perform safely and effectively. The training to a level of competency must be repeated annually, and the emergency response plan must be rehearsed regularly as part of the overall training program of the site.

(q) **Emergency Response to Hazardous Substance Releases:** This paragraph covers emergency responders not elsewhere covered. This includes municipal first responders, company response teams who respond to emergencies at locations other than their primary place of employment, and anyone else not specifically provided for in other parts of the regulation.

(Appendix A) - Personal Protective Equipment Test Methods

(Appendix B) - General Description and Discussion of Levels of Protection and Protection Gear.

(Appendix C) - Compliance Guidelines

INTERPRETATION of the Regulation as it pertains to CHEM-TRONICS

Employers at CERCLA or Equivalent Sites

To the best of CSA's knowledge, CHEM-TRONICS is NOT conducting any required or voluntary clean-up efforts. Thus, this section DOES NOT APPLY.

Employers at any site that looks like a CERCLA "clean-up" site, whether Federally ordered, State ordered, or voluntary, must comply with all parts of this regulation (b) through (o). The specific items which must be addressed in the compliance program are:

A. Develop a written Safety and Health Plan which addresses each element mandated in paragraphs (b) - (o).

B. Provide training for general site workers:

40 hours initial training
3 days On-The-Job
8 additional hours to supervisors & managers
8 hours annual refresher training

C. Provide training for other site workers:

24 hours initial training
1 days On-The-Job
8 additional hours to supervisors & managers
8 hours annual refresher training

Employers at RCRA TSDF's

CHEM-TRONICS is a Generator, only. Thus, this section DOES NOT APPLY.

Employers at a RCRA Treatment, Storage, or Disposal (or Recycling) Facility must comply with all elements contained in paragraph (p). The specific items which must be addressed in the compliance program include:

A. Develop a written safety and health plan which addresses each element in paragraphs (p)(1) - (p)(8).

B. Develop a written Emergency Response Plan. The Site "Emergency Planning Manual" meets this requirement.

C. Provide emergency response training to each emergency responder as specified:

24 hours initial training
8 hours annual refresher training

The training currently in progress will meet this requirement.

Employers who are Large or Small Quantity Generators

This sub-paragraph [(p)(8)] is the only section which applies to CHEM-TRONICS.

Generators can elect not to have an Emergency Response Team. CSA strongly recommends against this option. It carries severe potential liability. Generators who have employees respond to emergencies must comply with sub-paragraph (p)(8).

A. Develop a written safety and health plan which complies with (p)(8). Since OSHA has not directly defined the level of competency, the employer is obligated to prepare a definition statement and document that each emergency response team member meets that level of competency.

CSA is developing a generic Safety and Health Plan and Statement of Competency. These will be made available to

CHEM-TRONICS as a courtesy. If CHEM-TRONICS would like CSA to prepare a site-specific version, CSA will do so at our regular CHEM-TRONICS consultation rate.

B. Train all emergency response personnel to the level of competency determined appropriate for the company.

Insofar as all CHEM-TRONICS EMERGENCY RESPONSE TEAM members are currently trained to the Level of Competency defined above, and insofar as this training can be clearly documented, CHEM-TRONICS is in compliance.

C. Provide annual refresher training to maintain the level of competency.

D. Provide sufficient rehearsals of the emergency response plan to assure that it is implemented safely and effectively if needed.

CHEM-TRONICS is currently meeting this requirement with bimonthly training scenarios. The minimum level of training under item (p)(8)(C) for the CHEM-TRONICS facility would be quarterly drills. With six training drills per year, in CSA's opinion, the CHEM-TRONICS facility is within compliance.

E. Train all other employees in how to recognize an emergency and how to respond correctly.

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San Diego, CA 92111
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E M E R G E N C Y R E S P O N S E
P R O C E D U R E S

at

CHEMTRONICS
El Cajon, CA

prepared by:

CHEMICAL SAFETY ASSOCIATES, Inc.
8388 Vickers St. Suite 216
San Diego, CA 92111
619/565-0302

The staff of CHEMICAL SAFETY ASSOCIATES, Inc. developed this information based on experience working with many companies to develop and implement emergency response capability. A written emergency plan may not be operable; it must be implemented and tested. While the information in this manual is based on actual experience, circumstances and conditions at each facility and of each incident differ and emergency preplans and actions must reflect these unique characteristics.

San Diego, CA. 1987

EMERGENCY RESPONSE TEAM MISSION

The mission of the Emergency Response Team is to help protect facility personnel and to mitigate the consequences of emergency incidents. Within specific buildings, each team will be organized with its own structure of Captain and Assistant Captain. The Company Safety Staff will respond to all incidents to provide backup man power, equipment & supplies, and other resources as needed. The Safety Staff will also provide emergency response coordination in the absence of a responsible Building Captain.

The Supervisor of Safety and Environmental Protection or his designee is the named Emergency Coordinator and will be the primary contact during normal working hours with the City Fire Department, should assistance from the municipal emergency response system be required.

The role of the Emergency Response Team is protection of site personnel while minimizing the risk to themselves. Because of the additional risks that the Team incurs when responding to an incident, the Team is equipped with specialized equipment and provided intense, specialized training to help them perform their mission in the safest, most effective manner possible.

The type incidents for which the Emergency Response Team will be activated include, but are not limited to:

Medical Emergencies
Fire Emergencies
Chemical Spills & Gas Releases
Severe Weather Emergencies
Earthquakes
Building Evacuations
Aircraft crash

INTRODUCTION

Emergencies happen frequently, but always some where else. When an accident or injury occurs at your workplace, who will respond? How will the responders behave? Will they help or hinder? These questions address serious issues. In the worst case, the decisions made by responders could mean the difference between an injury and a fatality or a spill and an explosion. The bottom line issues are "Does your Company need an Emergency Response Team (ERT)" and "What are the cost/benefits of an ERT?".

To begin an examination of these issues, two examples will be examined. The "company" at which they occur is in a major metropolitan area, with very good municipal emergency support services.

Example 1

> A clerical worker develops deep chest pains, shortness of breath, and becomes quite pale. The pain radiates to his shoulders and arms and to his abdomen.

Example 2

> A fire breaks out in the trash dumpster located behind your plant. It is adjacent to a plant wall, near a water hose.

Consider how (1) your Company would RESPONSE and (2) how your Company should RESPONSE. The best course of action would be for trained personnel to take command of the incident and control it until the municipal emergency response services arrived.

Consider what this requires: trained company responders, a decision to call for outside assistance, and a method of directing that assistance to the incident. If we examine these examples in a bit more detail, some of the concerns and problems related to the underlying issues will become apparent. Let's assume that your Company employs 10 persons involved in primarily clerical tasks. Should your company have an ERT and if so, how many of your employees should be involved? Consider the other extreme; your Company employees 5000 persons at this site, many of whom are involved in heavy manufacturing related tasks. Again, should your Company have and ERT and how many people should be involved?

This question must be addressed by the management of every Company, regardless of size. The answer is basically a form of risk analysis - is the probability of an INCIDENT sufficiently low to ignore? Again, some examples may help to focus the issue. Consider a medical office staffed by a physician, a nurse, and a receptionist. Clearly, a "medical ERT" already exists, but how would they RESPONSE if a fire occurred in the office? Risk assessment in such a situation is seldom done; the occurrence# of fire is such a low probability event that it isn't considered. The response to a medical problem is commonplace and it is "unnecessary" to prepare.

An alternative analysis is a cost/benefit analysis; a comparison of the costs of developing and maintaining an ERT versus the benefit such a group will provide. The costs for

developing an ERT can be easily obtained. Included are such items as employee time, training, and equipment. The benefits are more difficult to determine. American industry as a whole experiences lost time injuries per 100,000 manhours worked. The average lost time injury costs $4,750 in compensation and expenses and causes 16.2 days of restricted activity. The difficult value to determine is the effect an ERT will have on these numbers. Experience suggests that an ERT will reduce the severity of an INCIDENT. The conclusion which can be drawn from this discussion is that no clear rules exist for when an ERT becomes cost effective. Each management must make the decision for its own unique situation. The management of CHEMTRONICS has decided to implement an Emergency Response Team to help mitigate foreseable industrial emergencies at the El Cajon facility.

A major objective of the meeting today is to provide you the information needed to make an informed decision about your participation on the Team.

What is an Emergency Response Team?

The EMERGENCY RESPONSE TEAM is a group of Company employees who have a particular desire to help their friends and colleagues during an emergency in the working environment. Some of the EMERGENCY RESPONSE TEAM members will bring special skills and knowledge to the TEAM; some will bring their desire to help fellow workers in an emergency. All must receive intensive, ongoing

training to best utilize their skills, knowledge, and ability.

The primary mission of the EMERGENCY RESPONSE TEAM is to

PROTECT HUMAN HEALTH AND SAFETY.
This includes their OWN health and well-being.

The EMERGENCY RESPONSE TEAM is the primary response group to all emergencies on site. Team Members will assume control of an incident until relieved by management or by an appropriate response official. The EMERGENCY RESPONSE TEAM will act as an extension of the management of the Company following the procedures and guidelines in the EMERGENCY RESPONSE PLAN.

FORESEEABLE INCIDENTS

Certain type emergencies can to be expected to happen at most facilities at a fairly predicable rate. Small fires, chemical spills, illness and injury are the most common. Other emergencies may occur, though with lower frequency. Earthquakes, severe weather, and civil disobedience fall into this group. These are all examples of "foreseeable incidents", or to restate it an other way, we know these type of problems will occur at know rates, we just can't say when exactly when they will occur. On the other hand, an aircraft crashing into your plant, or an employee being struck by lighting is not a generally recognized "foreseeable incident". The

incident rate is too low to make a good prediction of how often these types of problems will occur.

An ERT must be prepared to cope with foreseeable emergencies. Good basic training in the skills of assessment and containment will provide the tools needed to cope when the unexpected occurs.

The major FORESEEABLE EMERGENCIES which will be addressed in this seminar include:

FIRE/EXPLOSION

INJURY/ILLNESS

CHEMICAL SPILL or RELEASE/ENVIRONMENTAL THREAT

CIVIL DISOBEDIENCE

SEVERE WEATHER/FLOODS

EARTHQUAKE

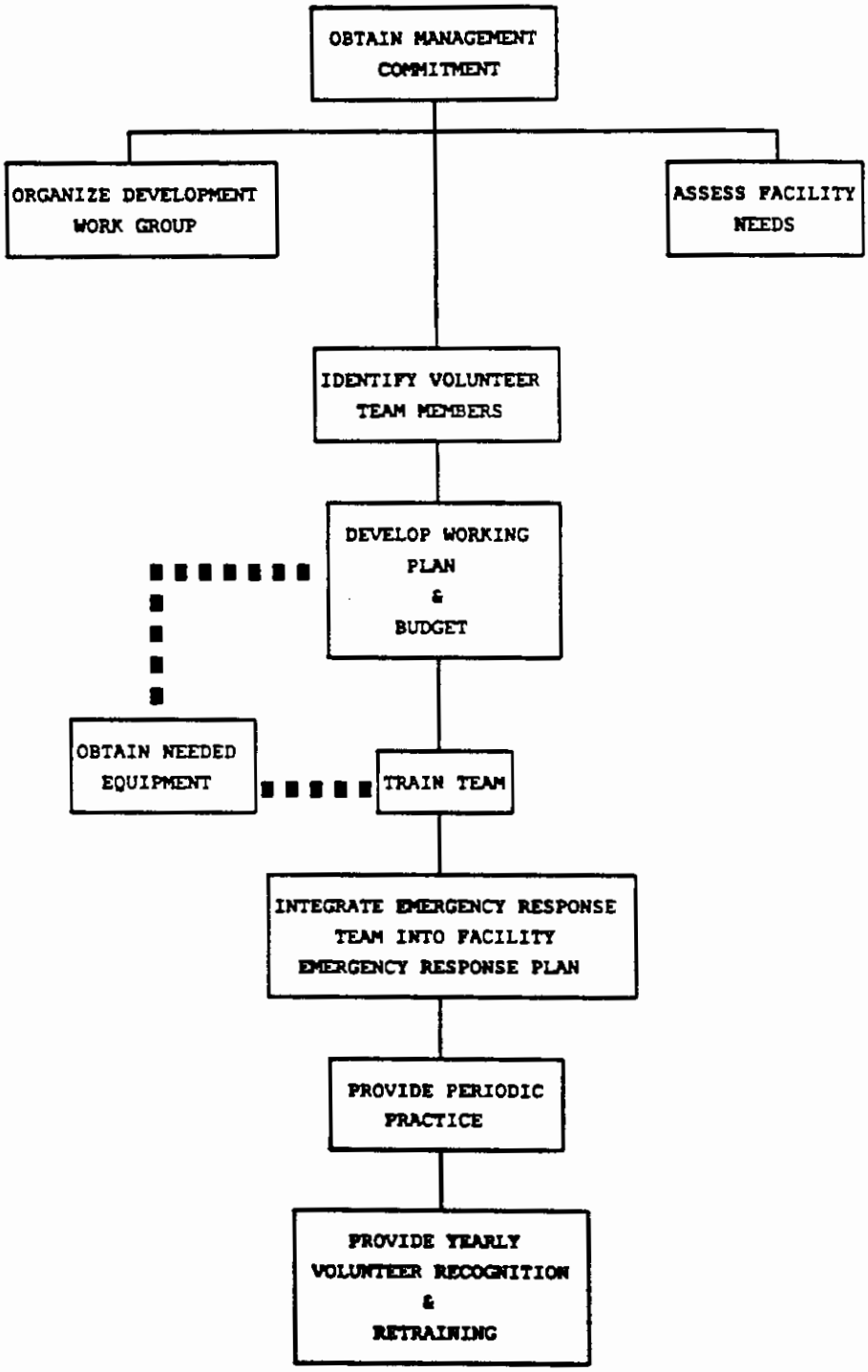
BOMB THREATS

AIR CRAFT CRASH ON-SITE

DEVELOPING AN EMERGENCY RESPONSE TEAM

Shown on the next page is an Overview of the various steps needed to set up a emergency response team.

OVERVIEW


OBTAIN MANAGEMENT COMMITMENT
ORGANIZE DEVELOPMENT WORK GROUP
ASSESS FACILITY NEEDS
IDENTIFY VOLUNTEER TEAM MEMBERS
DEVELOP WORKING PLAN & BUDGET
OBTAIN NEEDED EQUIPMENT
TRAIN TEAM
INTEGRATE EMERGENCY RESPONSE TEAM INTO FACILITY EMERGENCY RESPONSE PLAN
PROVIDE PERIODIC PRACTICE
PROVIDE YEARLY VOLUNTEER RECOGNITION & RETRAINING

Recruiting of volunteers

Team mebers will be volunteers. You have been selected as a special person who may be interested in serving on this important mission. If, following this meeting, you decide you do not wish to be a member of the ERT, please let us know. If you know others who may be interested in being on the team, we would like their names. Your supervisor will be asked to authorize your release time for training and response. Management have given its support to the project, and your supervisors will understand that a significant time commitment will be made by the volunteer responder(s), especially during the training period, In addition, each member of the emergency response team will be approved by the Company physician.

Any employee who is (1) currently trained and certified in the skills of the medical first responder or (2) is trained in some area of normal municipal response (fire, police, ambulance) or (3) possesses a needed skill or body of knowledge or (4) is willing to volunteer to receive such training is a resource. Ultimately, all such employees will need some training or retraining.

Evaluation of the needs

The Safety and Environmental Compliance staffs of CHEMTRONICS have already performed an initial evaluation of your facility in the various areas of a foreseeable INCIDENT to make a semi-quantative estimate of the risk of an incident. The

evaluation of risk is basically the estimation of the probability that a certain type of incident will occur multiplied by the potential severity of that incident. For example, the accidental detonation of a nuclear warhead inside your facility would be the most severe incident one could imagine. But if the probability of this happening is close to zero, then the risk would also be close to zero. On the other hand, a case of chemical dermatitis will have a low severity rating, but if the chances of it occurring are almost certain, then it's risk may be greater than the nuclear explosion.

Making accurate estimates of probability and severity of potential incidents is usually very difficult. Both involve personal judgement calls as well as the possibility of having numerous unknown factors in the equations. For the purposes of your own work area and the ERT, we suggest you make qualitative estimates as follows: VERY LOW (0.10), LOW (0.25), MODERATE (0.50), HIGH (0.75) AND EXTREME (0.90). Use this scale for estimating both the severity and the probability of an incident at your facility. The RISK scale will then go from zero (no risk) to one (maximum risk).

Fill out the chart below and calculate the risk factor for the various foreseeable incidents given. All facilities will also have "site specific" foreseeable incidents which depend on the nature of the facility, geographical location, proximity to other facilities and many other factors. Use the blank space in the chart for a site-specific incident.

DEGREE OF RISK

INCIDENT	PROBABILITY	X	SEVERITY	=	RISK
FIRE/EXPLOSION					
INJURY/ILLNESS					
CHEMICAL SPILL					
CIVIL DISOBEDIENCE					
SEVERE WEATHER/FLOODS					
EARTHQUAKE					
BOMB THREATS					
AIR CRAFT CRASH					

EMERGENCY RESPONSE PLAN

CHEMTRONICS is currently developing an "Emergency Response Planning and Implementation Guide", which is a written document to serve as a guide for the ERT during a response to an incident. This document will slowly evolve as experience at the facility increases and as the facility safety program develops increased incident prevention programs. As part of its training, the ERT will become very familiar with the Emergency Response Planning and Implementation Guide.

ACTIVATION OF THE EMERGENCY RESPONSE TEAM

The Emergency Response Team may be activated for any situation which requires unual response on-site. While many situations are repeated with sufficient frequency at industrial

locations to warrant specific mention, the Team must be prepared to cope with what ever specific details the incident presents. In general, the Team will always be activated whenever any of the following occur.

I. Fire/Explosion

Any confirmed open fire.

Any confirmed explosion

Any process or equipment which threatens to get out of control and produce conditions which could lead to fire or explosion.

Any procedure or process which requires back-up fire protection.

II. Smoke or Odor

Any "smoke of undefined origin" which continues for more than 5 minutes of investigation as to source.

Any odor of undefined origin which lasts for more than 15 minutes.

III. Accident/Injury/Illness

Any loss of consciousness

Signs/symptoms of shock

Signs/Symptoms of stroke

Allergic reactions

Poisonings

Diabetic reactions

Seizures

Trauma victims with:

Falls of five feet or greater

Motor vehicle accidents with:

passenger injury

passenger ejection

pedestrian struck

major vehicle damage

Anatomic factors such as:

Penetrating trauma

Lacerations with uncontrolled bleeding

Blunt trauma to head, neck, torso, or abdomen

Amputations

Burns (any percentage, 2 or 3°)

Any injury to head, neck, chest, back, abdomen

Any other situation in which you feel victim needs additional care.

Extreme exposure to excessive heat or cold.

Any eye injury

Any electrical shock or burn

Minor cuts, lacerations, or bruises needing bandaging or cold paks (or bring victim to Company medical center)

IV. Chemical Spills or Releases

Any spill of any substance in excess of 1 quart.

Any spill of extremely flammable, extremely corrosive, extremely toxic substances in excess of de minimus (a drip from a pipette is de minimus)

Any personal contamination

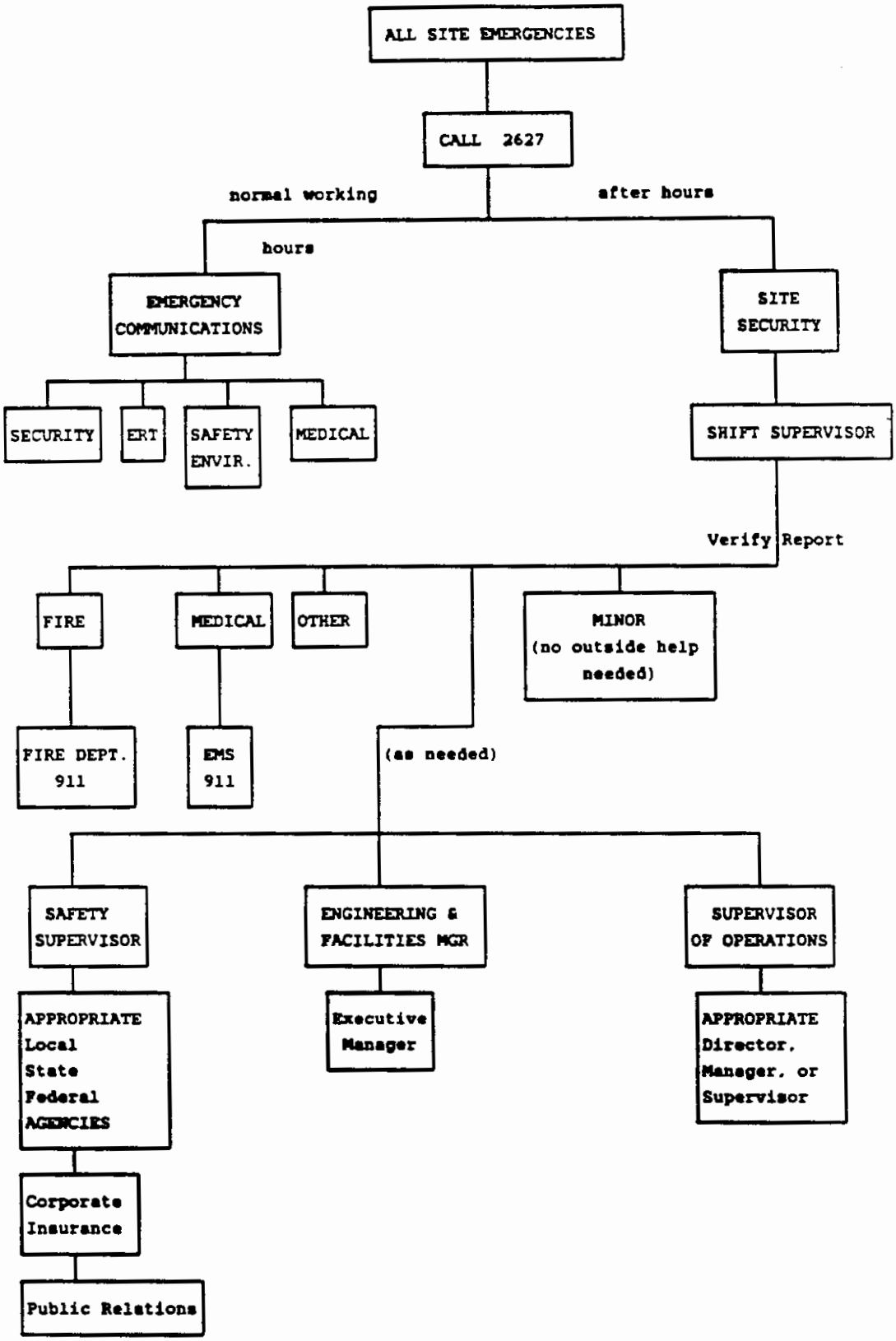
Any leaking container

Any uncontrolled compressed gas release

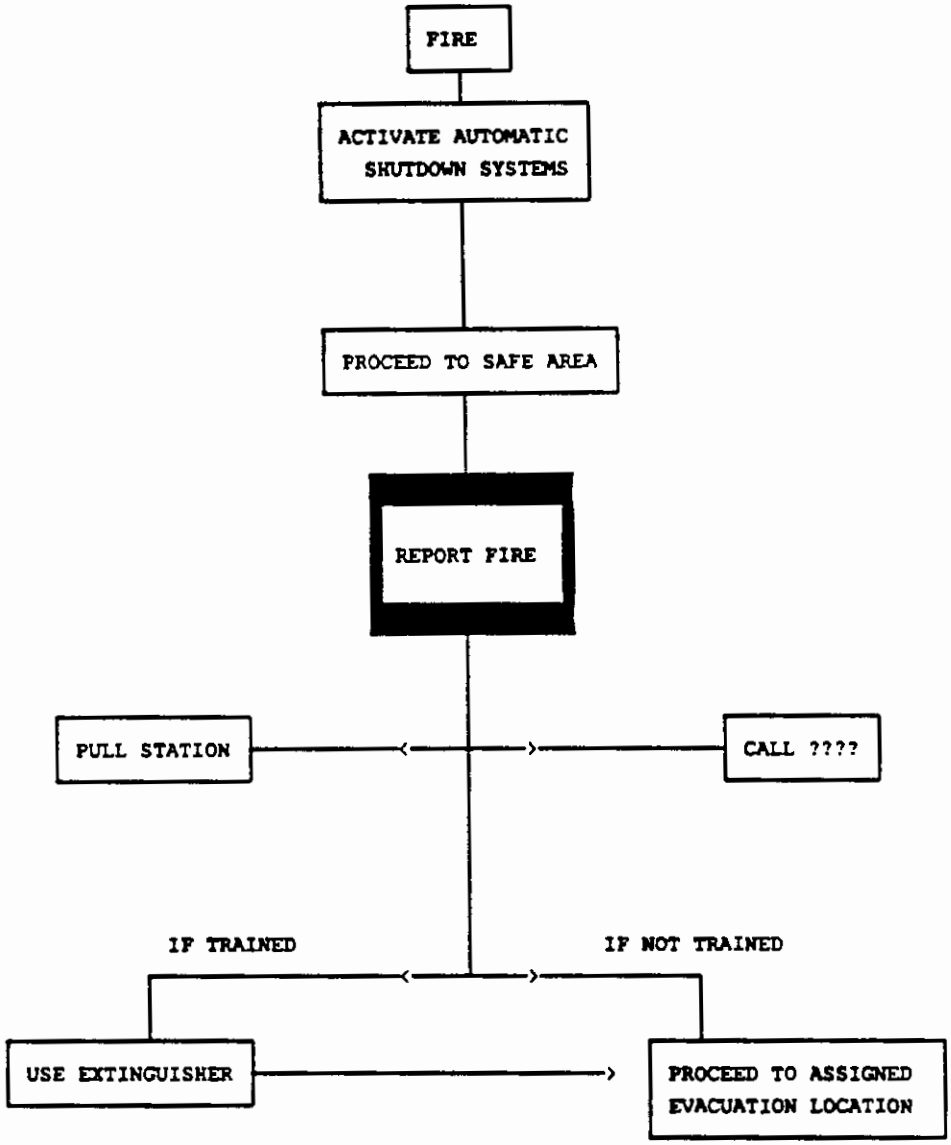
V. Any situation which significantly disrupts the work place or poses a possible adverse effect on human health or safety.

When an incident is reported to the Company emergency communications system, an immediate determination as to the nature and extent of the incident must be made. Based on this information the pre-planned response procedures must be activated.

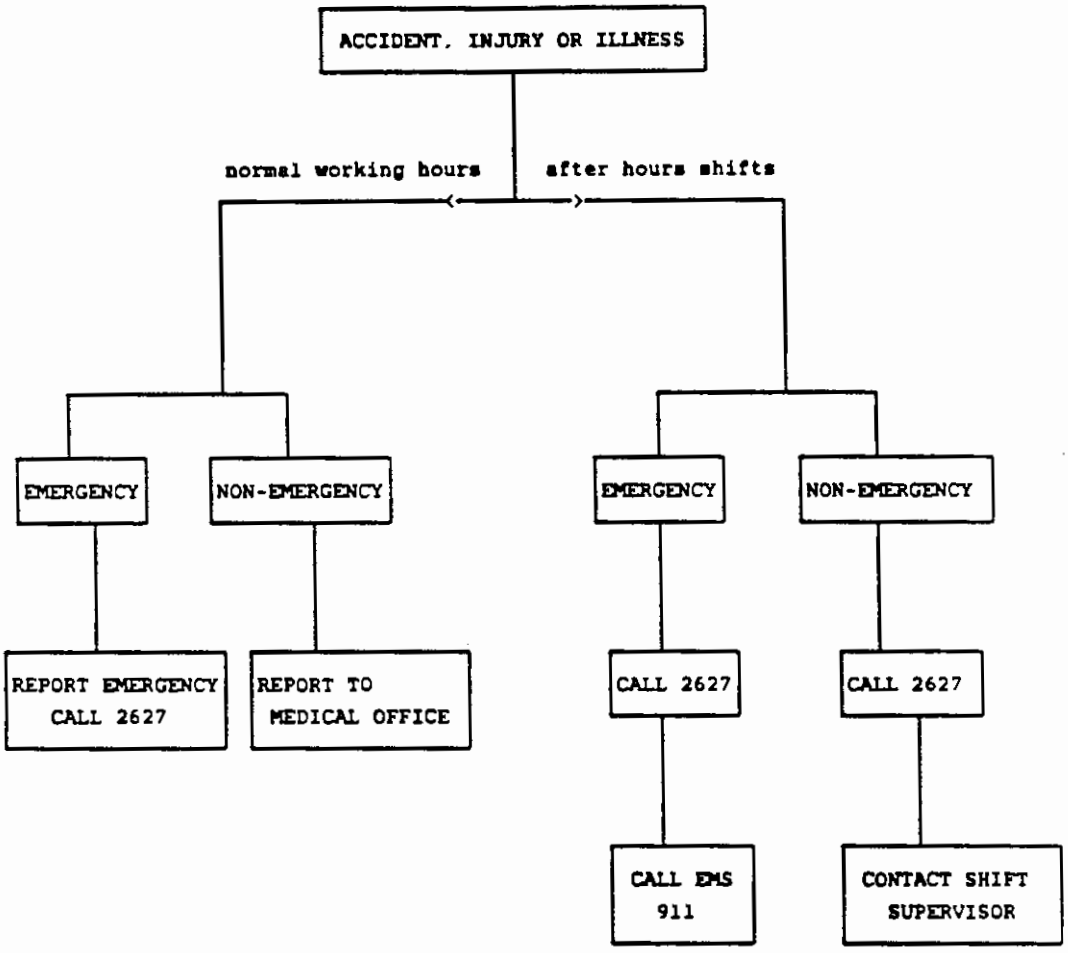
ALL SITE EMERGENCIES RESPONSE MATRIX



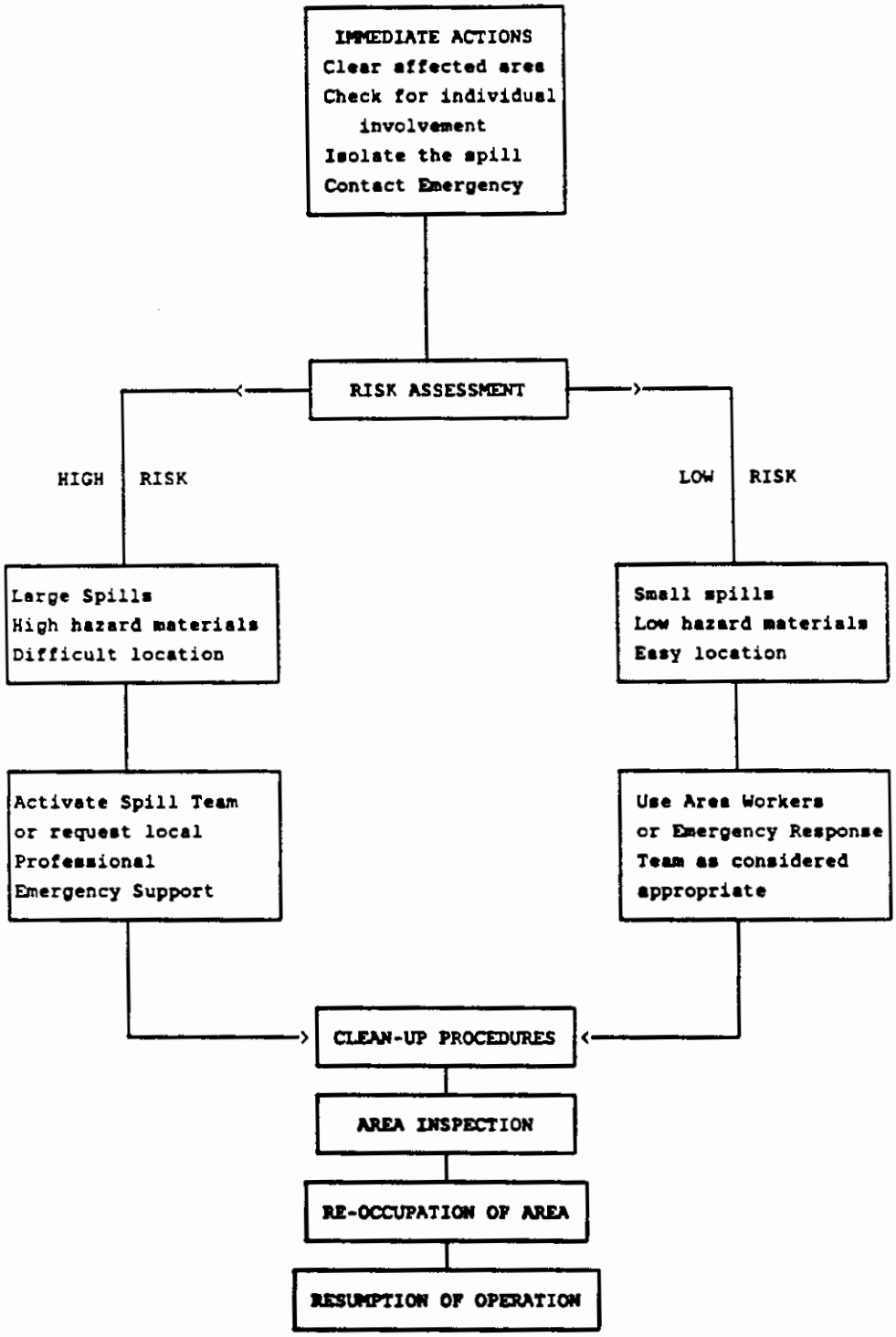
FIRE EMERGENCY RESPONSE MATRIX - ALL EMPLOYEES



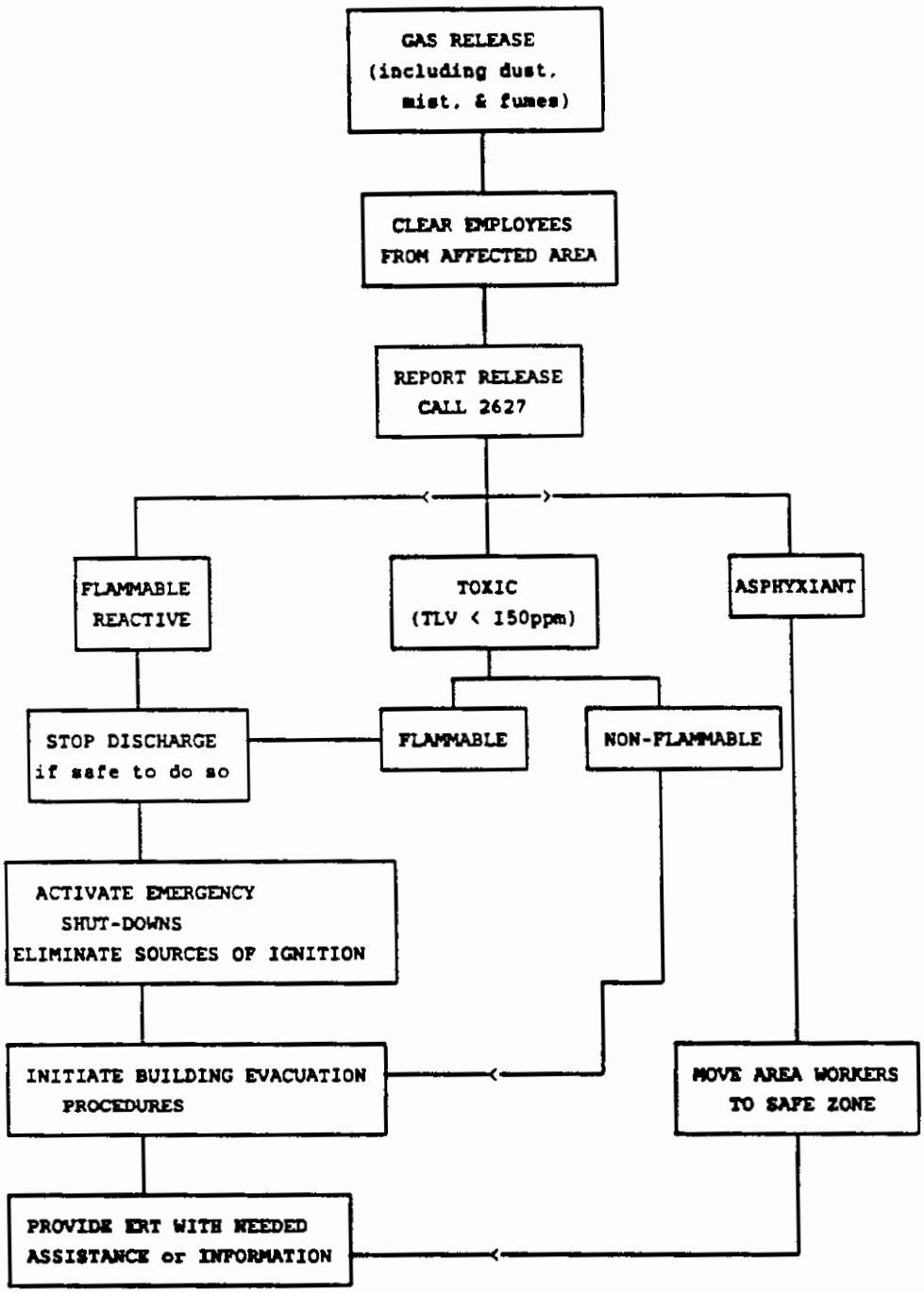
MEDICAL EMERGENCY RESPONSE MATRIX



SPILL RESPONSE PROCEDURES



GAS RELEASE EMERGENCY RESPONSE MATRIX



Communications

For a facility larger than a single building or a single floor, radio communication is essential for the emergency response team. The radios should be intrinsically safe for potentially hazardous environments and should be issued to all members of the emergency response team. Communications is based at a central emergency number, 2627 at CHEMTRONICS. All initial incident reports come to this number and a response is dispatched and coordinated from this central number.

Telephone Procedures: Initial Incident Reporting

Upon answering an emergency call, it is the responsibility of security to obtain specific information and properly activate the EMERGENCY PLAN.

In case of a FIRE or EXPLOSION reported via the EMERGENCY PHONE NUMBER, the municipal FIRE DEPARTMENT (911) must be requested immediately.

The EMERGENCY RESPONSE TEAM and a named EMERGENCY COORDINATOR must be notified. The operator must record all communications on a COMMUNICATIONS LOG. During the duration of an emergency, the switch board must remain attended to handle communications, unless relieved from duty by the designated EMERGENCY COORDINATOR.

EMERGENCY RESPONSE TELEPHONE DIALOGUE

Employee Incident report:

Emergency Communication Response

"EMERGENCY RESPONSE. PLEASE STATE YOUR NAME:"

"WHAT IS THE PROBLEM?"

"IS ANYONE INJURED OR CONTAMINATED?"

"ARE YOU AT A SAFE LOCATION?"

If "YES", proceed; if "NO" "LEAVE THE AREA (OR BUILDING) AND CALL ON ANOTHER TELEPHONE (OR MEET A SECURITY GUARD AT (specify location).

"PLEASE STAND BY. I AM SENDING HELP.

PROCEDURES TO CONTACT EMERGENCY RESPONSE TEAM

*** REGULAR WORKING HOURS ***

USE THE EMERGENCY RESPONSE TEAM RADIO TO CONTACT 2 MEMBERS WHO ARE NEAREST THE OCCURRENCE. TEAM MEMBERS WILL RESPOND. IF THERE IS NO RESPONSE, ISSUE AN ALL CALL.

EMERGENCY AFTER HOURS RESPONSIBILITIES OF THE COMPANY SECURITY SERVICE

A. The Company SECURITY SERVICE is responsible for all security at the facility. It is charged to act a liaison with City/County law enforcement and emergency agencies. When an incident is reported to the emergency system after-hours and on holidays, the SECURITY OFFICER on duty must do the following:

1. Identify the caller and obtain his/her telephone number
2. Identify the nature of the emergency
3. Call for emergency support, if necessary
4. Dispatch an officer to the scene

5. Contact the Boiler House Operator
6. Maintain communications as needed
7. Maintain a log of all actions

==========

SECURITY FORCE PRIME RESPONSIBILITIES ARE TO:

1. PROTECT HUMAN HEALTH and SAFETY
2. MINIMIZE THE EXTENT or SPREAD OF THE PROBLEM
3. GET ASSISTANCE.

==========

Example of Information to be Obtained when Incident is Reported:

"EMERGENCY RESPONSE. PLEASE STATE YOUR NAME."

"WHAT IS THE PROBLEM?"

"IS ANYONE INJURED OR CONTAMINATED?"

"ARE YOU AT A SAFE LOCATION?"

If "YES", proceed; if "NO" "LEAVE THE AREA (OR BUILDING) AND CALL ON ANOTHER TELEPHONE (OR MEET A SECURITY GUARD AT (specify location).

"PLEASE STAND BY. I AM SENDING HELP."

EMERGENCY INCIDENT TELEPHONE LOG

NAME OF CALLER _____ TIME _____ DATE _____

CALLER LOCATION _____

NATURE OF INCIDENT: FIRE/EXPLOSION CHEMICAL SPILL GAS RELEASE INJURY/ILLNESS SEVERE WEATHER BOMB THREAT OTHER

Provide specific details on INCIDENT
WHAT IS BURNING?

WHAT WAS SPILLED (chemical name)? QUANTITY _____

WAS ANYONE CONTAMINATED?

NATURE OF INJURY/ILLNESS

OTHER INFORMATION:

COMMUNICATION RESPONSE: CALL MUNICIPAL FD CALL ERT CALL AMBULANCE

CALL COMPANY MD/RN DISPATCHED SECURITY OFFICER (# _____)

STATUS OF PERSON WHO REPORTED INCIDENT:

MAINTAIN LOG OF INCIDENT RELATED COMMUNICATIONS:

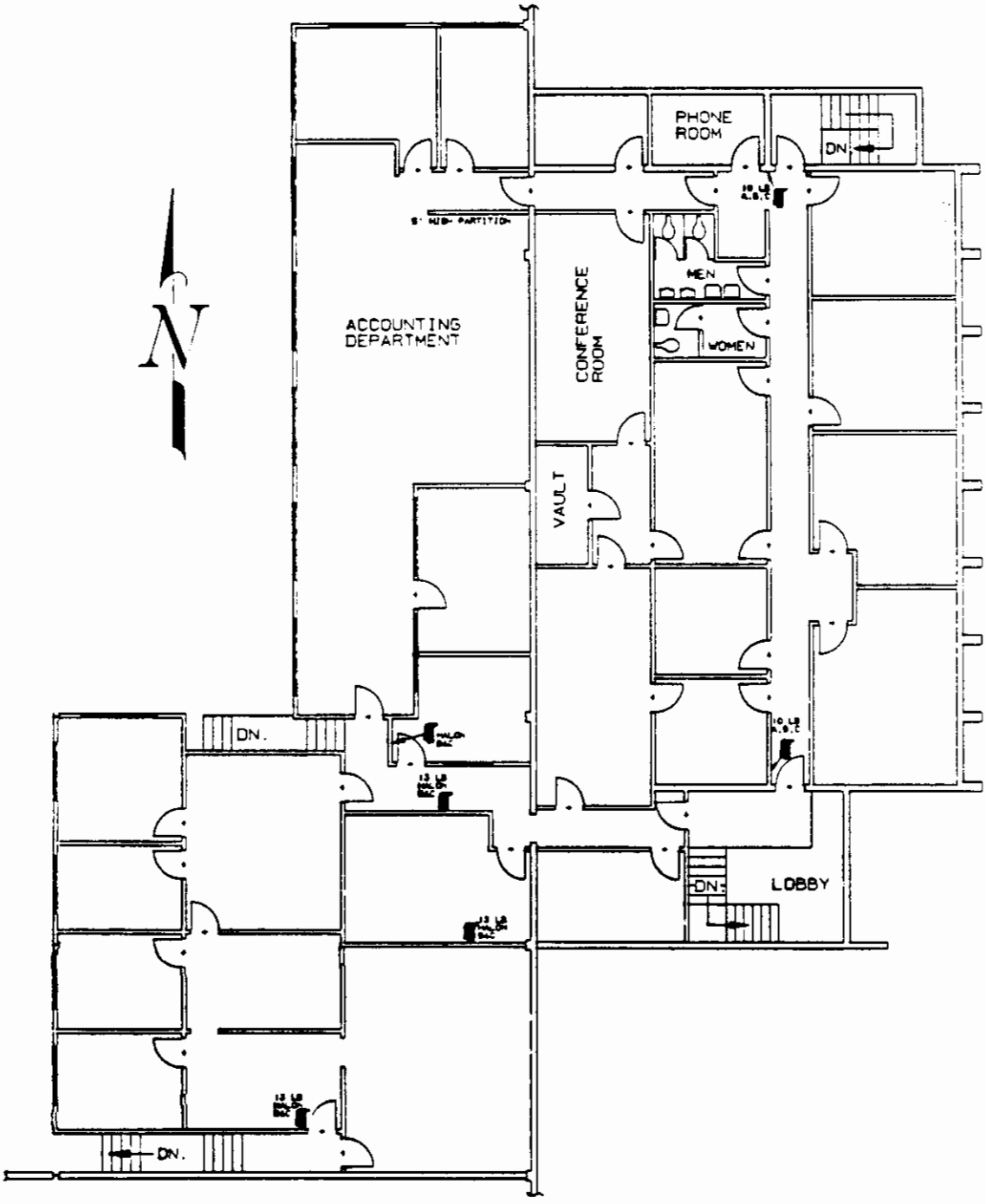
TIME	CALLED	CALLER	CONTENT

ATTACHMENT C-5

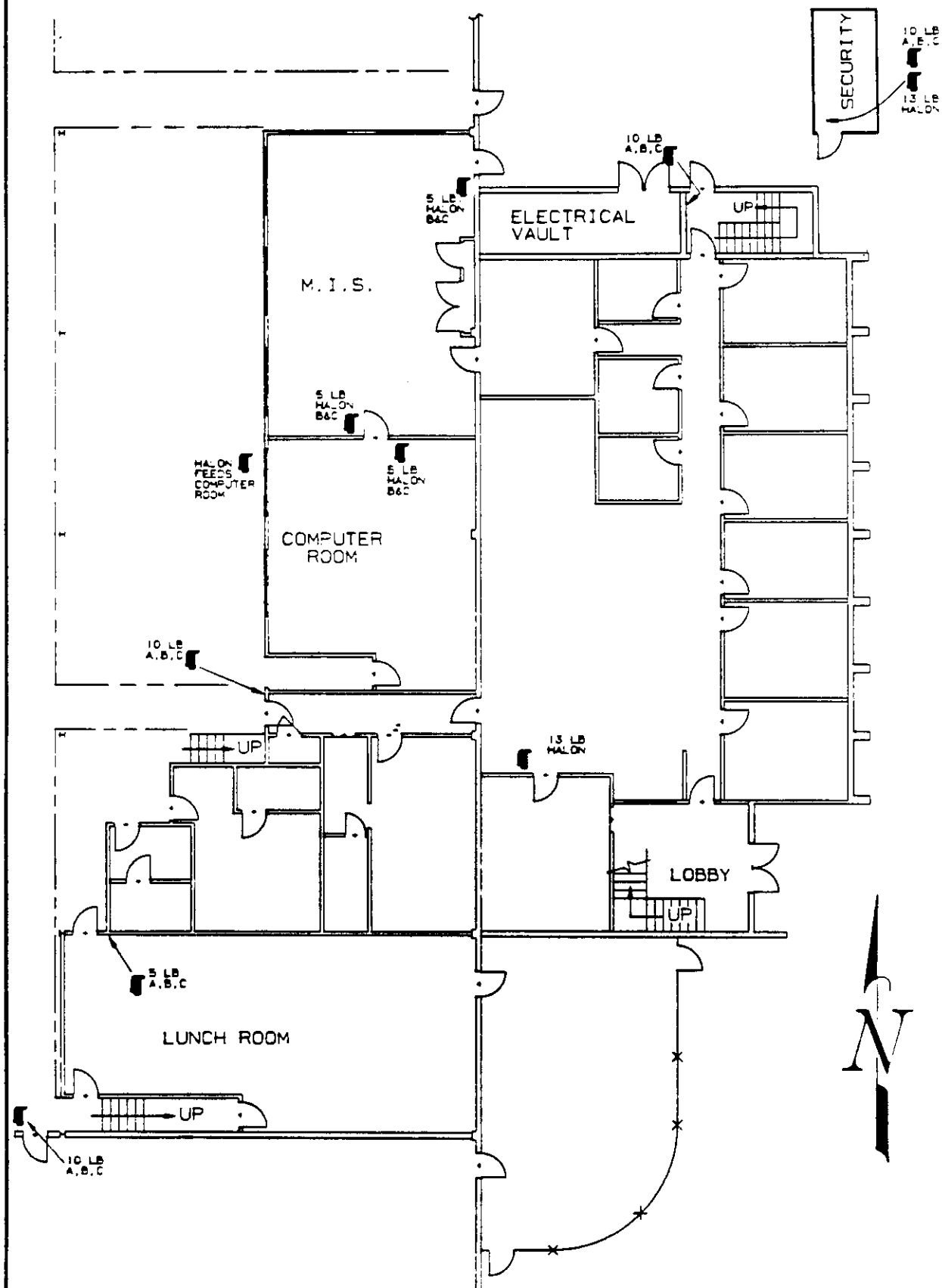
Class D Fire Extinguisher Layout

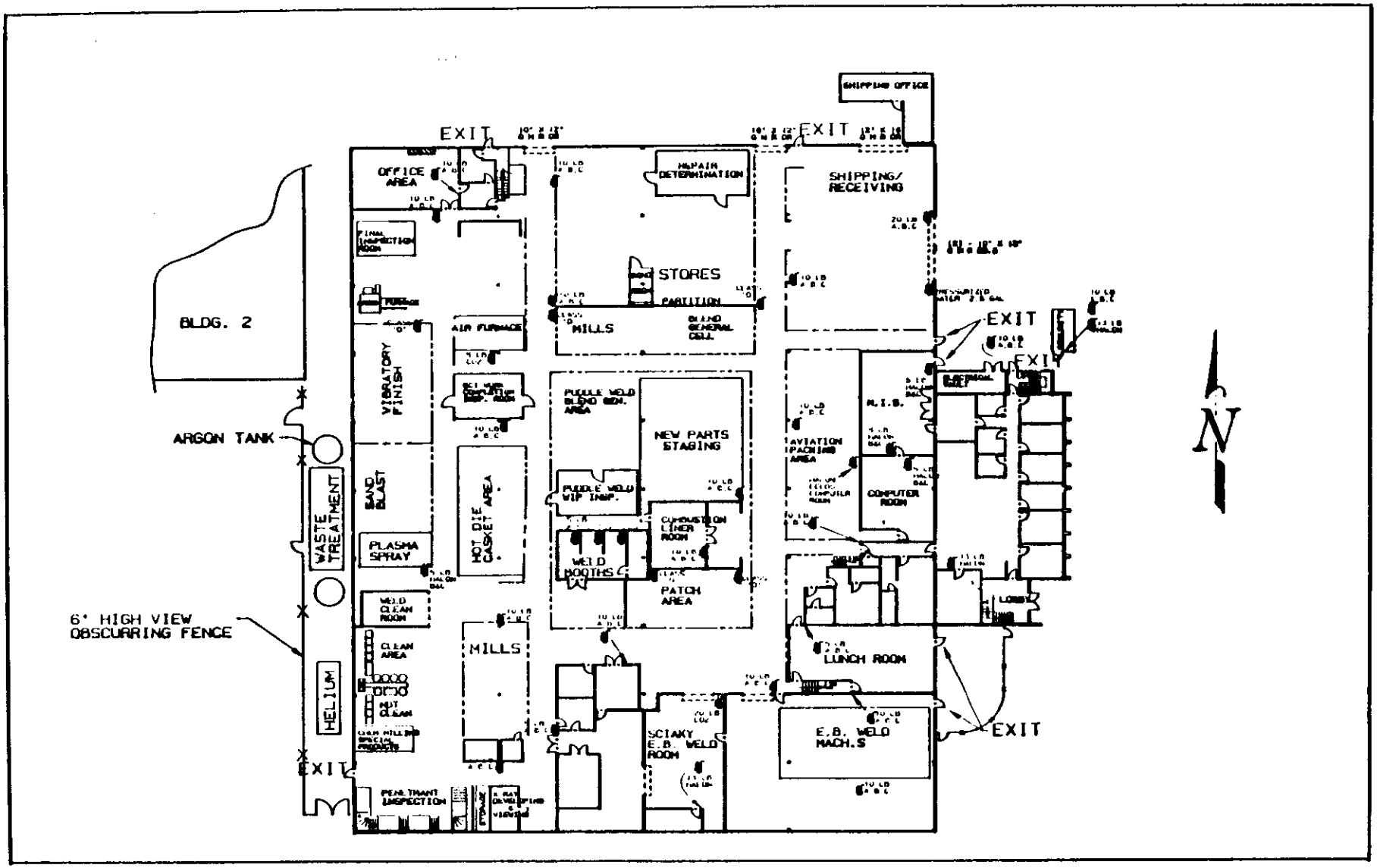
10 pages

BUILDING 1 - 2nd FLOOR OFFICE
FIRE EXTINGUISHER LAYOUT



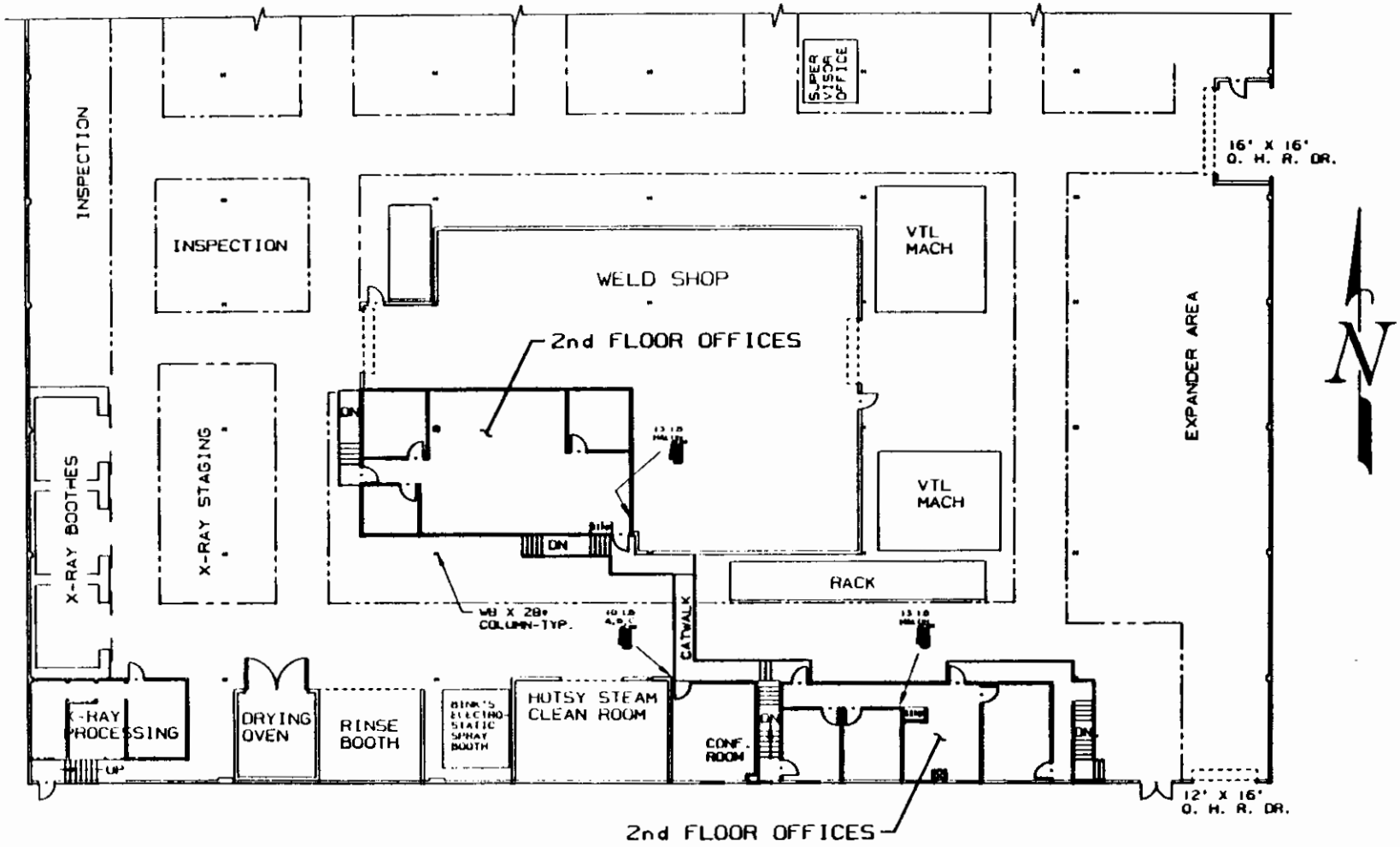
BUILDING 1 - FIRST FLOOR OFFICE
FIRE EXTINGUISHER LAYOUT



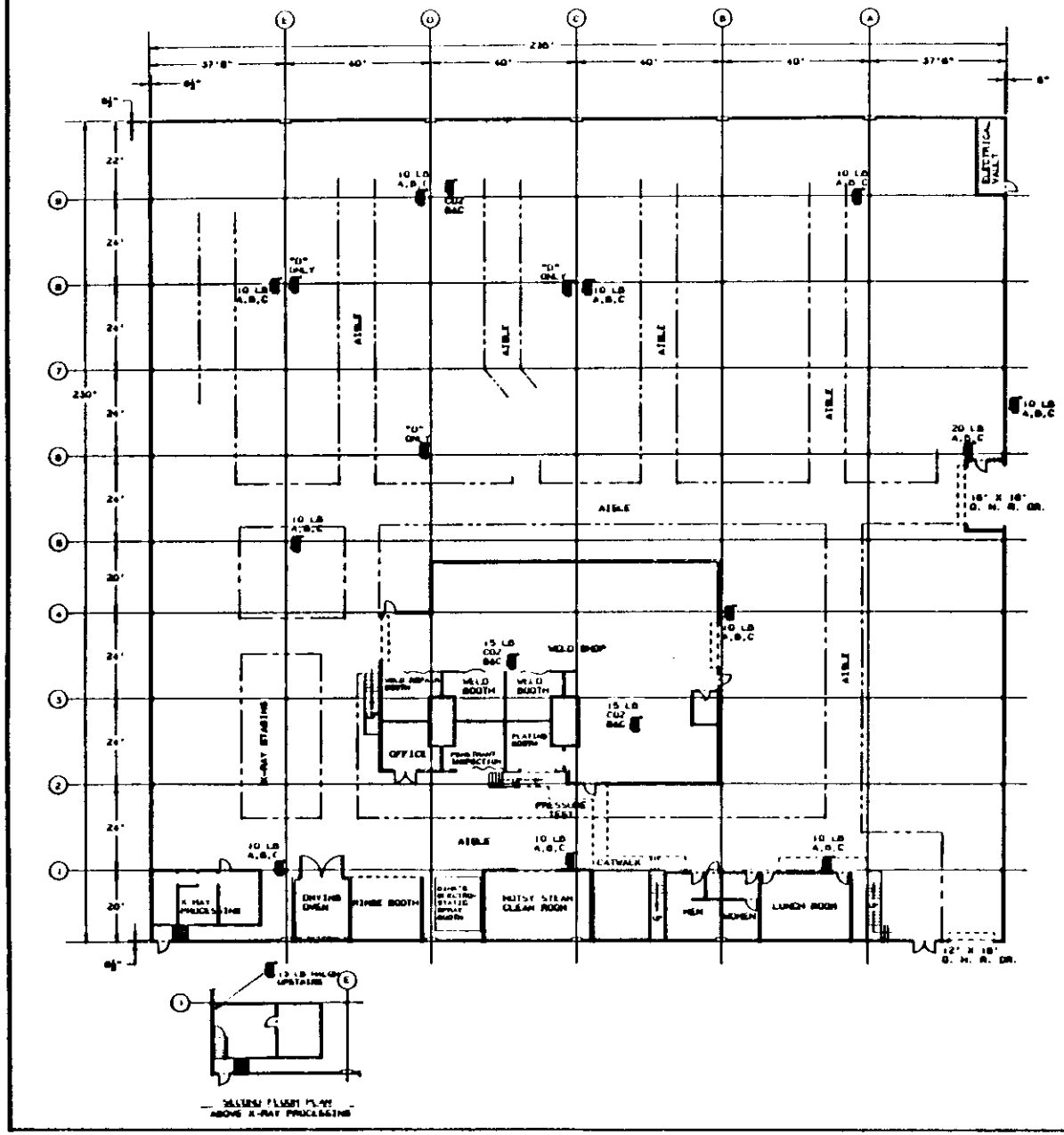

EXIT
EXIT
SHIPPING OFFICE
OFFICE AREA
REPAIR DETERMINATION
SHIPPING/ RECEIVING
STORES
PARTITION
MILLS
BLDG. 2
AIR FURNACE
EXIT
EXIT
VIBRATORY FINISH
PUDDLE WELD BLEND GRN. AREA
NEW PARTS STAGING
M.I.B.
ARGON TANK
AVIATION PACKING AREA
COMPUTER ROOM
SAND BLAST
PUDDLE WELD VIP INSP.
COMBUSTION LINER ROOM
WASTE TREATMENT
PLASMA SPRAY
HOT DIE CASKET AREA
WELD BOOTHS
PATCH AREA
6' HIGH VIEW OBSCURRING FENCE
WELD CLEAN ROOM
CLEAN AREA
MILLS
LUNCH ROOM
HELIUM
SCIAKY E.B. WELD ROOM
E.B. WELD MACH.S
EXIT
EXIT
PENETRANT INSPECTION
N

BUILDING 2 - 2nd FLOOR OFFICE

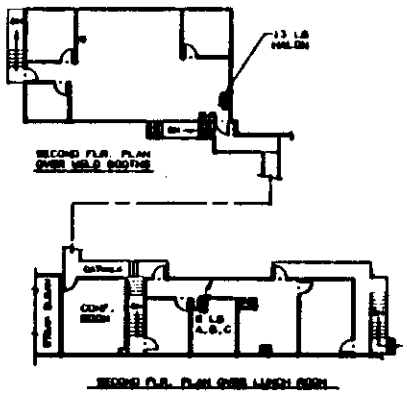
FIRE EXTINGUISHER LAYOUT

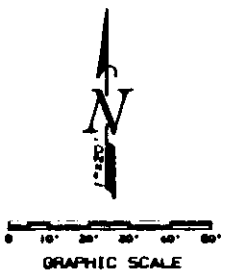


BUILDING 2 - FIRE EXTINGUISHER LAYOUT



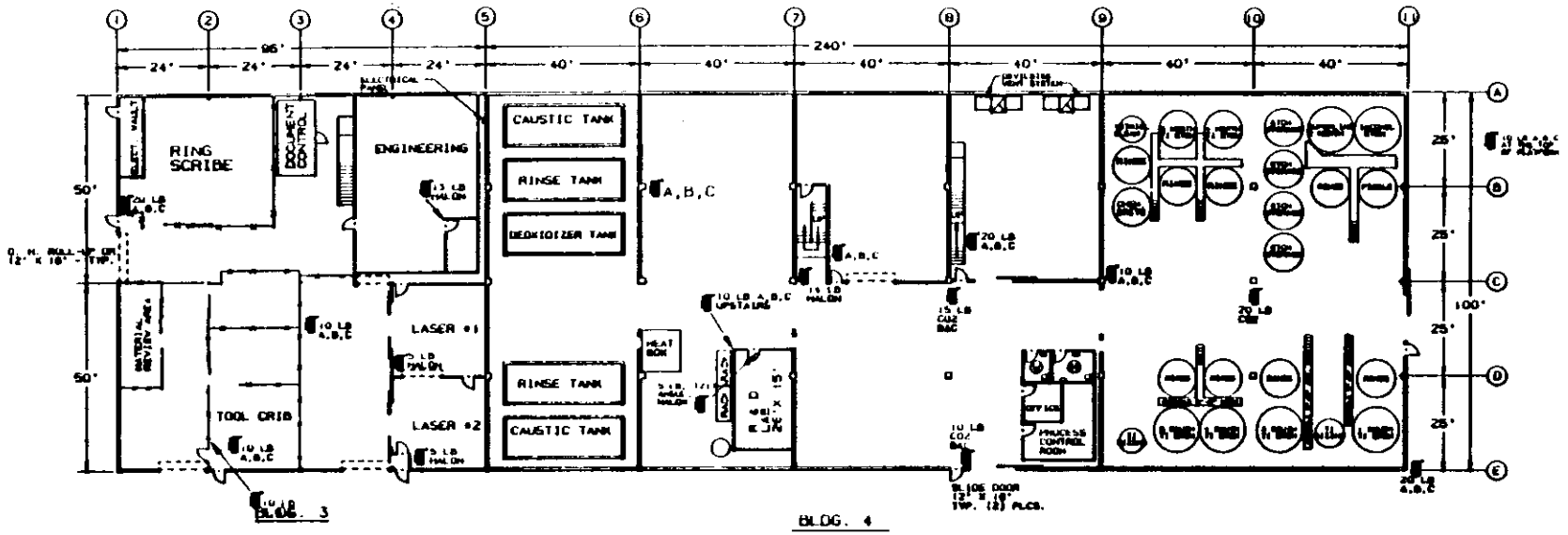
SECOND FLOR. PLAN ABOVE X-RAY PROCESSING

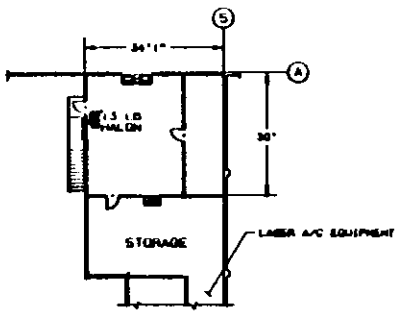




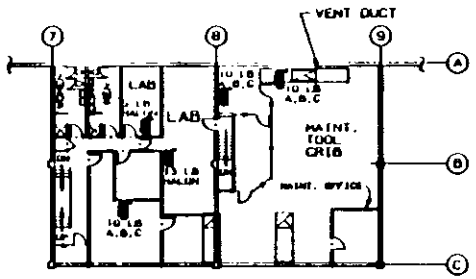
GRAPHIC SCALE

BUILDING 3 & 4 - FIRE EXTINGUISHER LAYOUT

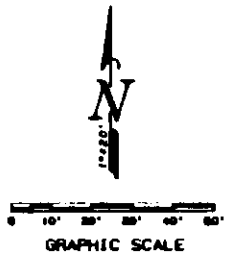




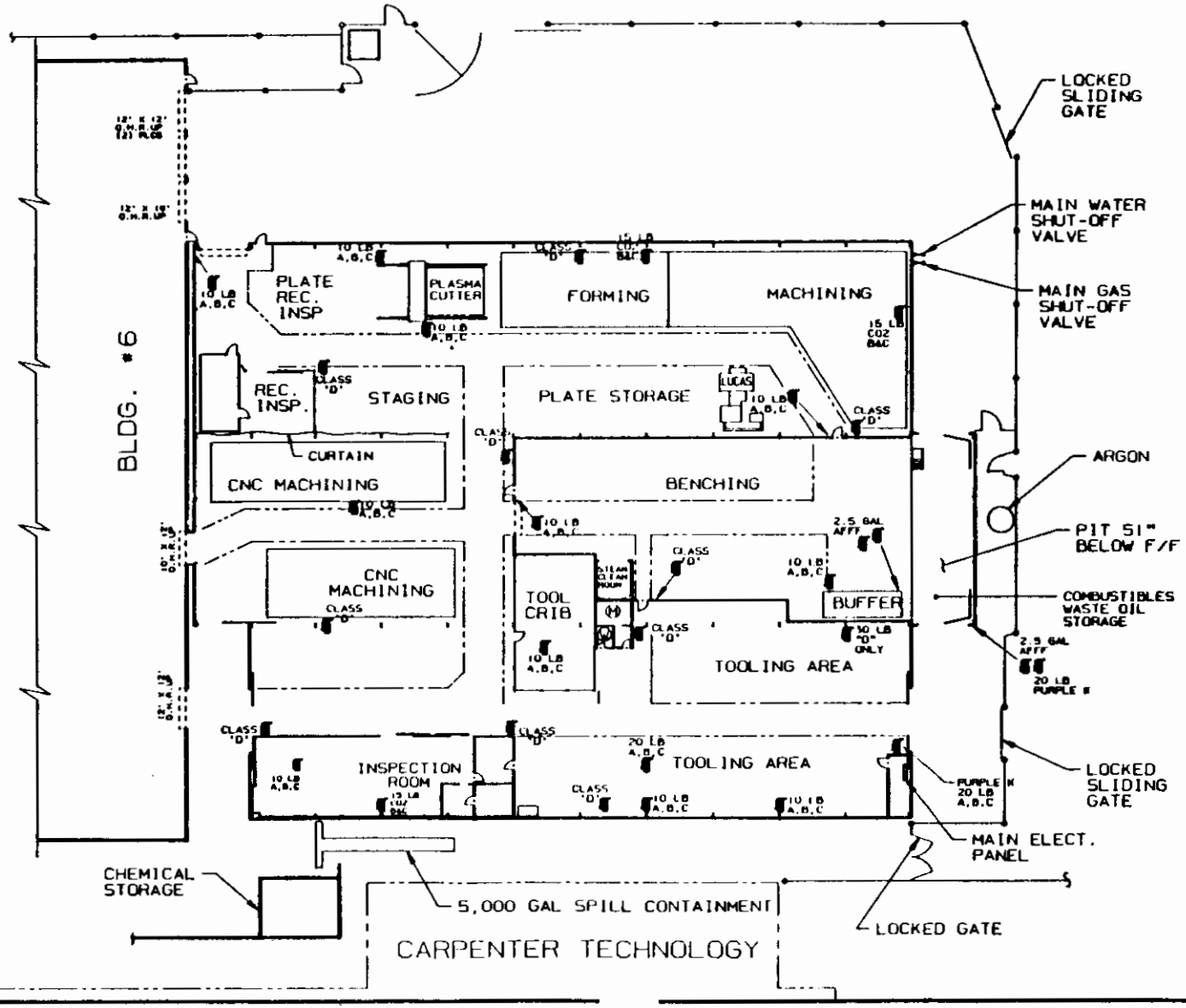
BLDG. # 3
2nd FLOOR ABOVE ENGRG.



MEZZANINE PLAN

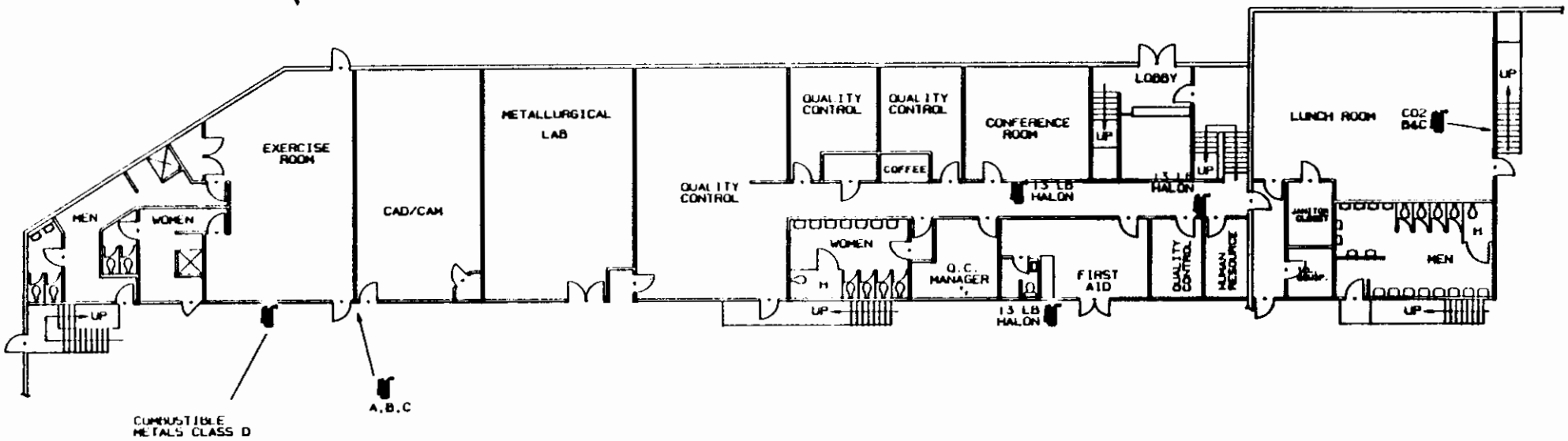


BUILDING 5 - FIRE EXTINGUISHER LAYOUT

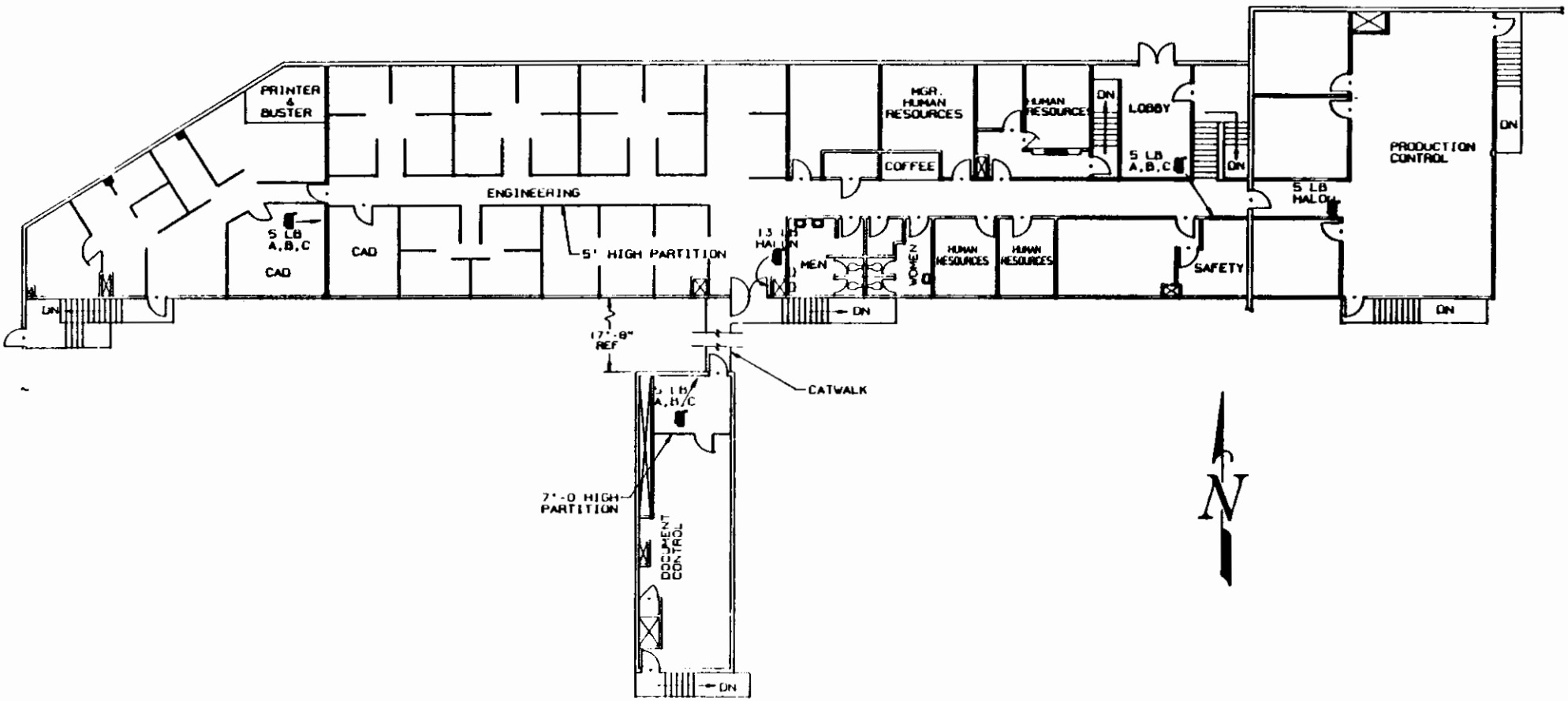


BUILDING 6 - 1st FLOOR OFFICE

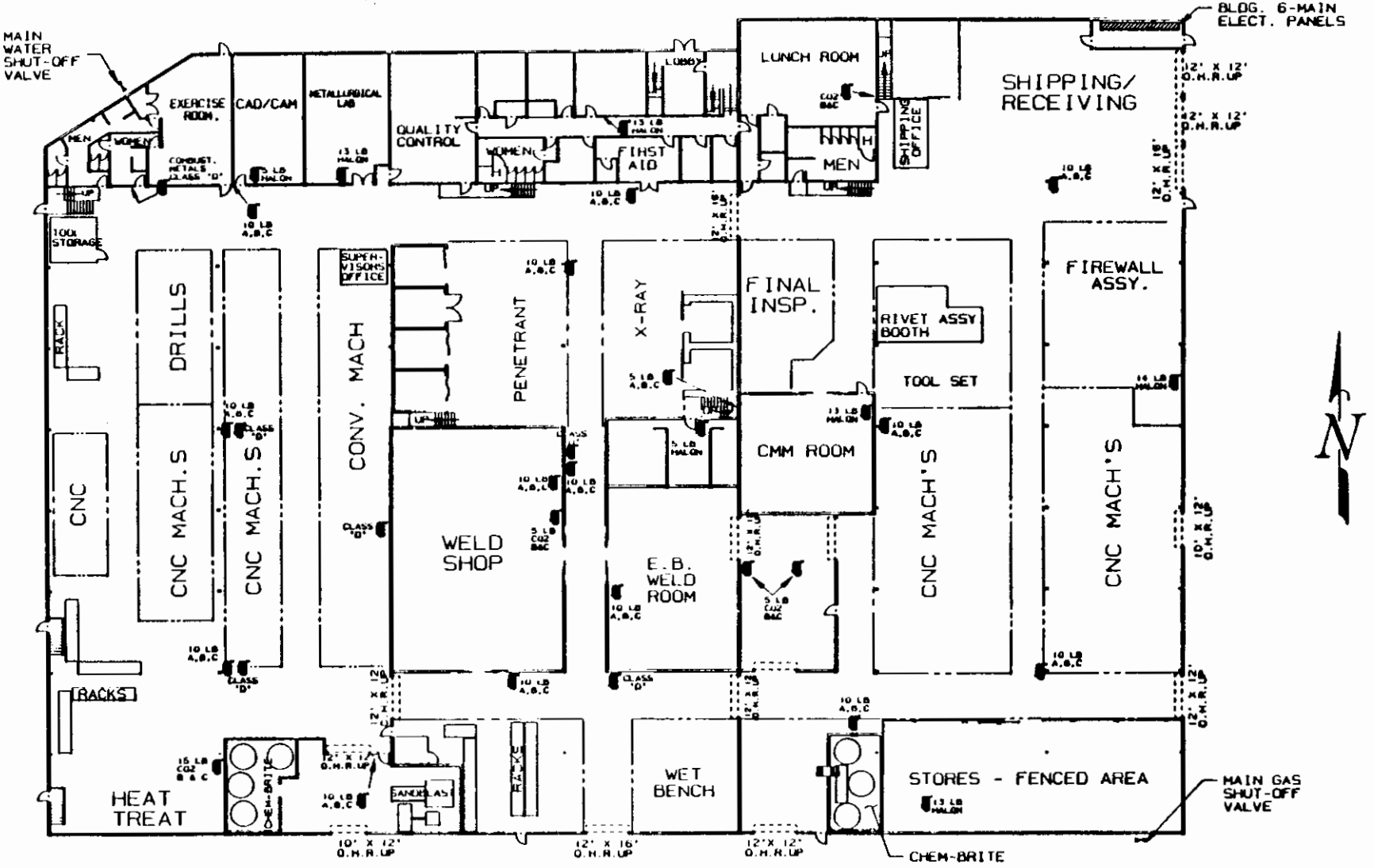
FIRE EXTINGUISHER LAYOUT



BUILDING 6 - 2nd FLOOR OFFICE
FIRE EXTINGUISHER LAYOUT



BUILDING 6 - FIRE EXTINGUISHER LAYOUT



OPERATIONAL COMPLIANCE TO REGULATIONS

14) POTENTIAL VIOLATION:

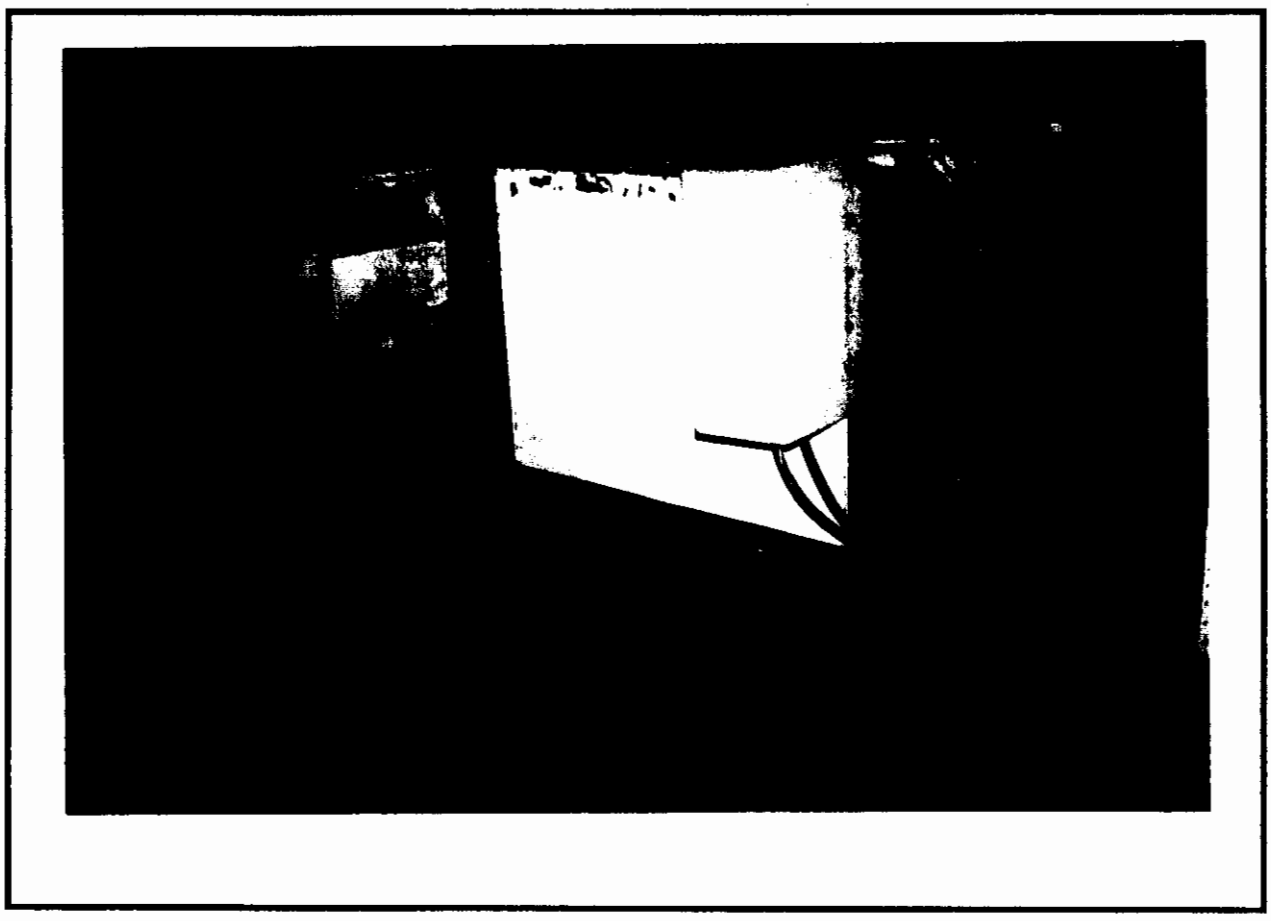
The facility is not maintained and operated to minimize the possibility of fire, explosion, or releases of hazardous waste or hazardous waste constituents to air, soil, and surface water that could threaten human health or the environment, for the following reasons:

(1) spills adjacent to the alkaline baths were noted during the inspection at Building 1;

RESPONSE:

1) There were no liquids found in the secondary containment or leaking past the secondary containment. Any potential release of liquid would be secondarily contained by the concrete berm.

PICTURE # 09. ITEM # 14 .1
SUBJECT: Building 1, Alkaline Bath



14) **POTENTIAL VIOLATION:** (continued)

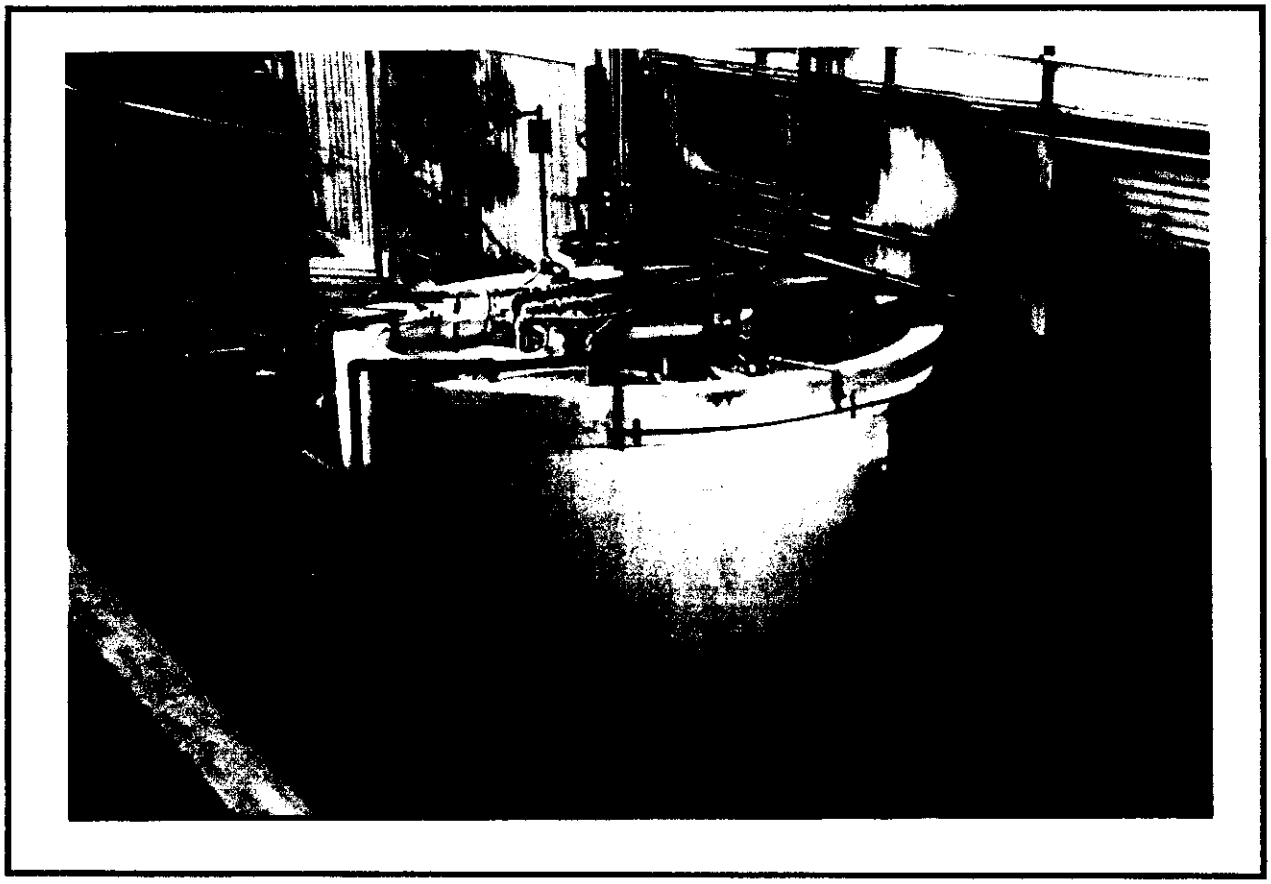
The facility is not maintained and operated to minimize the possibility of fire, explosion, or releases of hazardous waste or hazardous waste constituents to air, soil, and surface water that could threaten human health or the environment, for the following reasons:

2) piping and pumps associated with the neutralization process in Building 6 was visibly etched, indicating that releases of acid have occurred (Appendix C, Photograph 4);

RESPONSE:

2) The leaks in question were from the process steam piping containing an alkaline solution used to heat the tanks. These leaks were repaired .

PICTURE # 10, ITEM # 14.2
SUBJECT: EPA Report Appendix C, Photograph - 5



14) POTENTIAL VIOLATION: (continued)

The facility is not maintained and operated to minimize the possibility of fire, explosion, or releases of hazardous waste or hazardous waste constituents to air, soil, and surface water that could threaten human health or the environment, for the following reasons:

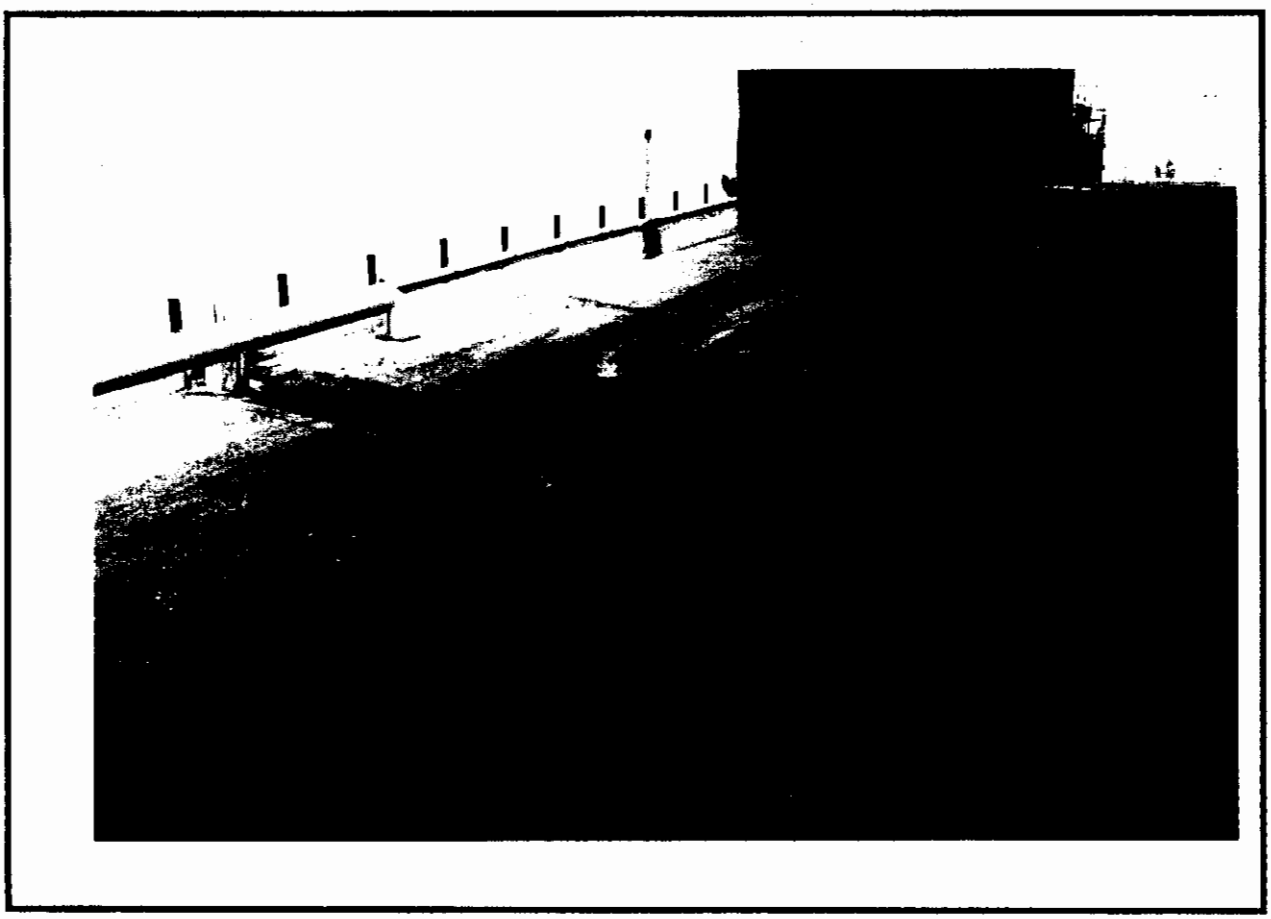
(3) The concrete and asphalt near the neutralization system in Building 6 was visibly etched, indicating that releases of acid have occurred (Appendix C, Photograph 4);

RESPONSE:

3) The leaks in question were steam leaks, containing a alkaline solution that etched the concrete. These have been repaired as described in item 14-2, (previous page). Further containment of a potential release past the secondary containment tank and the bermed area would be captured by a 5,000 gallon capture sump that is currently located in the alley way.

PICTURE # 11, ITEM # 14.3
SUBJECT: The 5,000 gallon capture sump located in the alley way behind BLDG-6.

The 5,000 gallon T-Shaped Sump.



14) POTENTIAL VIOLATION: (continued)

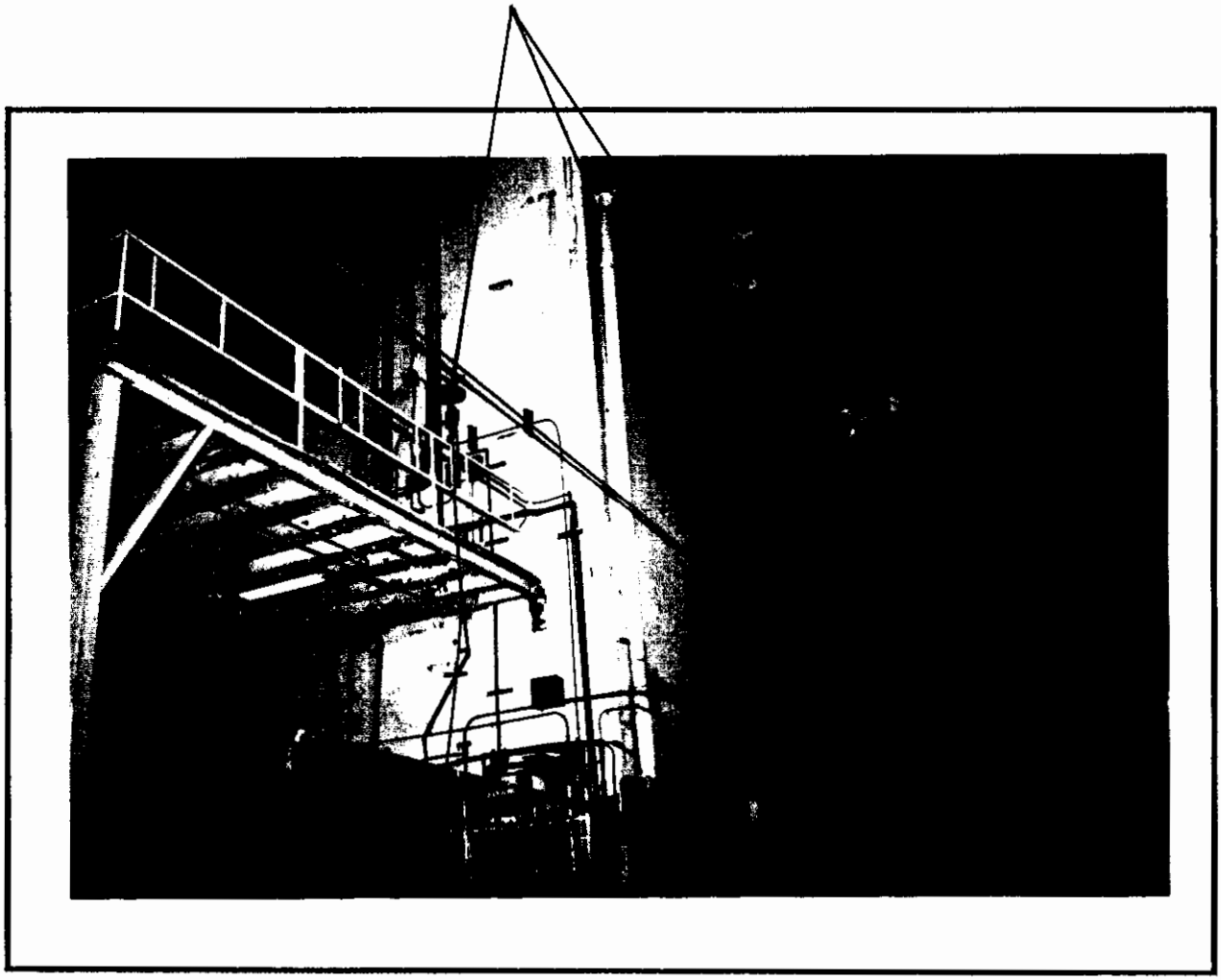
The facility is not maintained and operated to minimize the possibility of fire, explosion, or releases of hazardous waste or hazardous waste constituents to air, soil, and surface water that could threaten human health or the environment, for the following reasons:

(4) Releases from the information to document corrective measures taken to prevent any future releases. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.31)

RESPONSE:

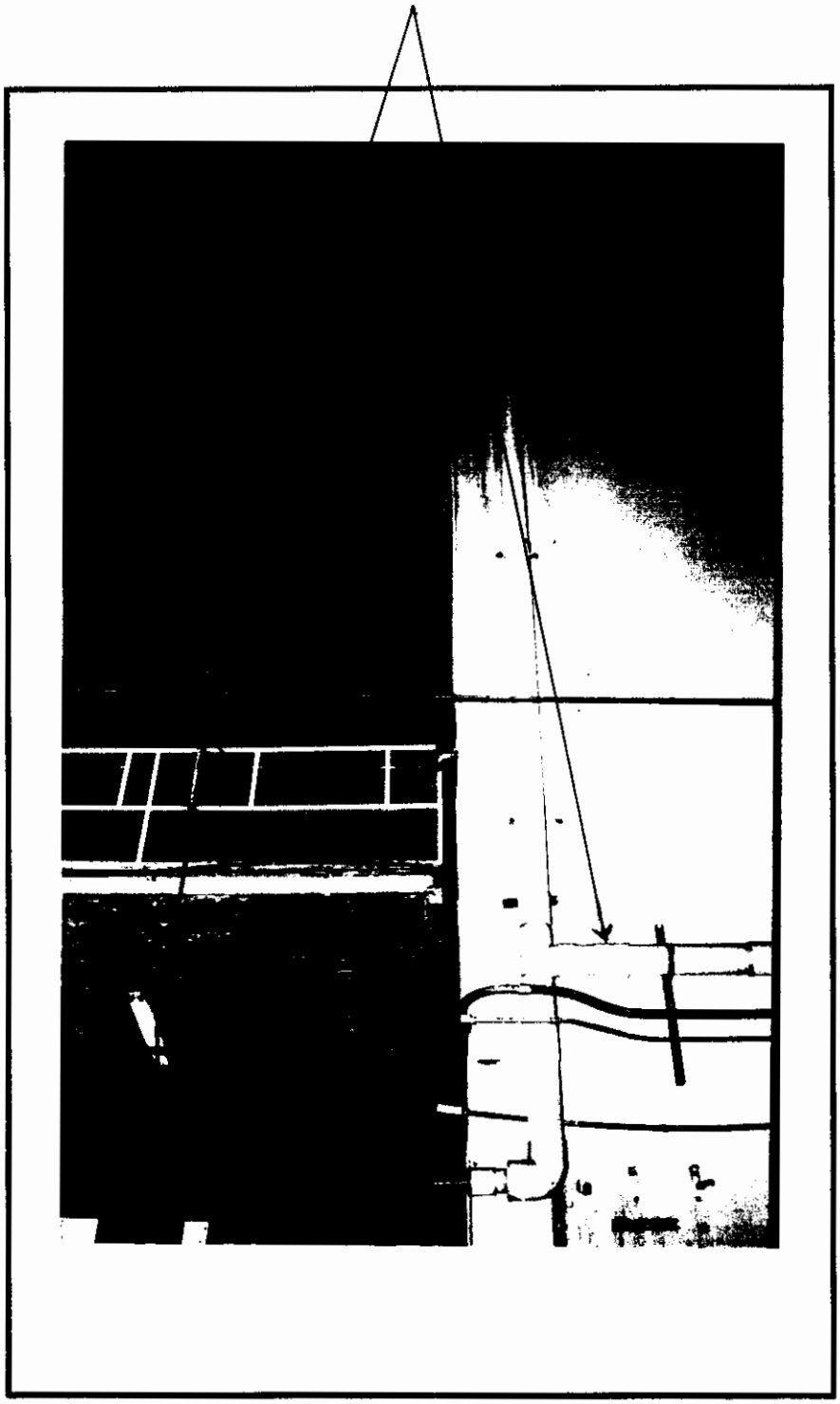
4) Corrective action has been completed (1989). Any release from the air scrubbers will be diverted to waste treatment and secondarily contained. A rain valve located on roof diverts any spill or water which may occur directly to waste treatment. T his is accomplished by a butterfly valve which is activated by rain only. (Appendix A, Photograph 7-showing valve for secondary containment)

PICTURE # 12. ITEM # 14.4
SUBJECT: The Spill run off collection piping on top of BLDG-4.



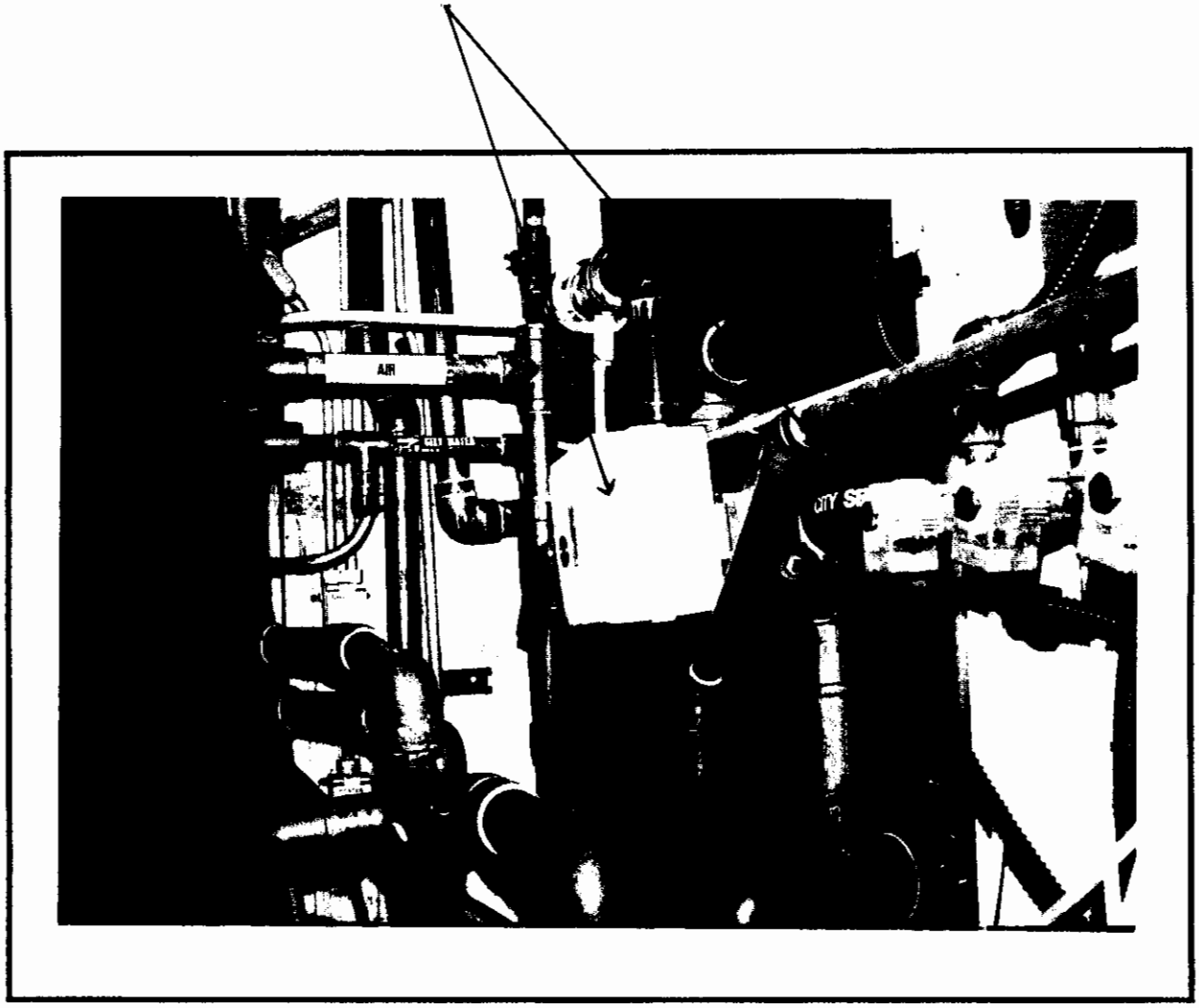
14.4 RESPONSE: (cont)

PICTURE # 13, ITEM # 14.4
SUBJECT: The Spill run off collection piping on top of BLDG-4.



14.4 RESPONSE: (cont)

PICTURE # 14, ITEM # 14.4
SUBJECT: The Spill run off control valve and piping system BLDG-4.



BIENNIAL WASTE REPORT

15) POTENTIAL VIOLATION:

Chem-Tronics did not submit a Biennial Hazardous Waste Report to Federal or State regulatory agencies by March 1 of 1990. (40 CFR Part 262.41(a))

RESPONSE:

The California Guidelines for the 1989 Hazardous Waste Report was not finalized till March 1, 1990. This document grants a blanket extension of the filing due date to **April 16 1990** (See attachment B-1). Our report was submitted April 2, 1990.

16) POTENTIAL VIOLATION:

Chem-Tronics did not submit with the Biennial hazardous Waste Report the EPA ID number, name, and address for each off-site TSD to which hazardous waste was shipped during the year. (40 CFR Part 262.41(a)(3))

RESPONSE:

This information is required on form OI, the **Off Site Information** form. This is not required by the State of California and the EPA only requires this form if it is required by the state. (See attachment B-2, 1989 Hazardous Waste Report guideline)

17) POTENTIAL VIOLATION: RESPONSE:

Chem-Tronics did not submit with the Biennial Hazardous Waste Report the EPA ID number of each transporter used during the reporting year for shipments to a TSD. (40 CFR Part 262.41(a)(4))

RESPONSE:

This information is required on form OI, the **Off Site Information** form. This is not required by the State of California and the EPA only requires this form if it is required by the state. (See attachment B-2, 1989 Hazardous Waste Report guideline.)

18) POTENTIAL VIOLATION:

Chem-tronics did not submit the description, EPA hazardous waste number, DOT hazard class, and quantity of each hazardous waste shipped off-site to a TSD. (40 CFR Part 262.41(a)(5))

RESPONSE:

This information is required on form OI, the **Off Site Information** form. This is not required by the State of California and the EPA only requires this form if it is required by the state. (See attachment B-2, 1989 Hazardous Waste Report guideline.)

ATTACHMENT B-1

California State Guidelines for the

1989 Hazardous Waste Report

2 pages

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY

GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF HEALTH SERVICES
714/744 P STREET
BOX 942732
SACRAMENTO, CA 94234-7320
(916) 322-3913

March 1, 1990

TO: All Treatment, Storage, or Disposal Facilities and Large Quantity Generators

SUBJECT: 1989 HAZARDOUS WASTE REPORT

Enclosed you will find a 1989 Hazardous Waste Report form. It is to be completed and returned to the Department of Health Services in order to fulfill the requirements of Title 22, California Code of Regulations, Section 66493 and/or 67165. This report is required by all treatment, storage, or disposal facilities (TSDF) and all large quantity generators. Even if you handle only California regulated hazardous waste, you must complete and return this report. (See page 2 for the definition of a large quantity generator and information on California regulated waste handlers).

Since the mailing of the reports has been postponed, the due date for their return has been automatically extended to April 16, 1990.

If you need assistance in completing the forms, please telephone the Hazardous Waste Report Help Line at (800) 876-0352. The help line operates Monday through Friday from 6:00 a.m. to 5:00 p.m. Pacific Standard Time.

Please read all instructions before completing the forms or calling the help line. Not all industries are required to complete all forms. The State of California does not require the completion and submittal of Form OI. Please disregard this form. Also, when completing the forms, use both the U.S. Environmental Protection Agency and California hazardous waste codes wherever applicable.

The Department is considering collecting the 1989 hazardous waste information electronically. Please disregard the instructions in the manual regarding electronic reporting. If you are interested in submitting data on magnetic media, please write to the Office of Hazardous Materials Data Management, Environmental Affairs Agency, P.O. Box 2815, Sacramento, CA 95812.

Please use the enclosed envelope to return the completed form. Thank you for your cooperation in this matter.

Donald A. Johnson

Donald A. Johnson, Chief
Surveillance and Enforcement Unit
Program and Administrative
Support Division
Toxic Substances Control Program

Enclosure

ATTACHMENT B-2

EPA Instructions for Completing

Form OI - OFF SITE IDENTIFICATION

1 page

DRAFT - August 25, 1989

INSTRUCTIONS FOR COMPLETING

FORM OI - OFF-SITE IDENTIFICATION

WHO MUST COMPLETE THIS FORM?

Sites required to file the 1989 Hazardous Waste Report must complete Form OI if:

- Form OI is required by your State, AND
- The site received hazardous waste from off site or shipped hazardous waste off-site during 1989.

PURPOSE OF THIS FORM

Form OI documents the names and addresses of off site installations and transporters.

HOW TO COMPLETE THIS FORM

Form OI is divided into five identical parts. You must complete one part for each off-site installation to which you shipped hazardous waste, each off-site installation from which you received hazardous waste and each transporter you used during the reporting year. If these off-site installations and transporters total more than five, you must photocopy and complete additional copies of the form. You do not need to report the address, Box D, for transporters.

Throughout the form, enter "DK" if the information requested is not known or is not available; enter "NA" if the information requested is not applicable. Use the Comments section at the bottom of the form to clarify or continue any entry. Reference the comment by entering the site number and box letter.

ITEM-BY-ITEM INSTRUCTIONS

Complete Boxes A through D for every off-site installation to which you shipped hazardous waste and every off-site installation from which you received hazardous waste during the reporting year.

Complete Boxes A through C for every transporter you used during the year.

Box A: EPA ID No. of Off-Site Installation or Transporter
Enter the 12-digit EPA ID number of the off-site installation to which you shipped hazardous waste or from which you received hazardous waste or the EPA ID number of the transporter who shipped hazardous waste to or from your site. If the off-site installation or transporter did not have an EPA ID number during the reporting year, enter "NA" in Box A.

Box B: Name of Off-Site Installation or Transporter
Enter the name of the off-site installation or transporter reported in Box A.

Box C: Site Type
Check all that apply to describe the off-site installation or transporter reported in Box A.

Box D: Address of the Off-Site Installation
Enter the address of the off-site installation reported in Box A. If the EPA ID number reported in Box A refers to a transporter, enter "NA" in Box D.

*U.S. GOVERNMENT PRINTING OFFICE: 1989 718-092

DRUM ACCUMULATION AREA PROJECT UPGRADE

19) POTENTIAL VIOLATION:
Chem-Tronics does not have an adequate internal communications or an alarm system capable of providing immediate emergency instructions to facility personnel in the filter press area outside of Building 4. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.32(a))

RESPONSE:
There is a Public Announcement speaker located over the 90 day waste accumulation area outside of Building 4. The maximum distance from this speaker to any point in the waste treatment yard is less than 90 feet.

PICTURE # 15. ITEM # 19.
SUBJECT: BLDG-4 Public Address Speaker, for emergency communications.

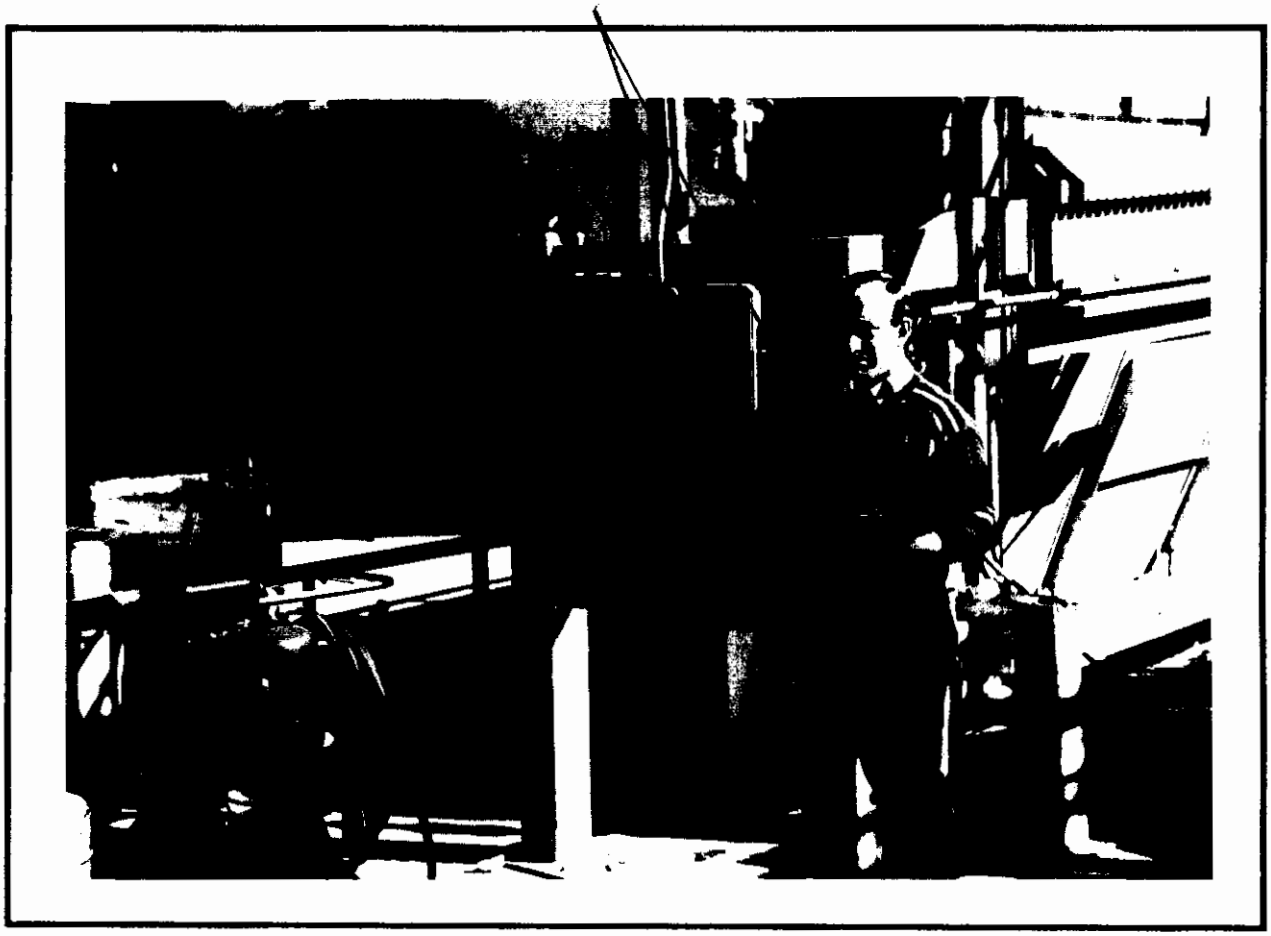
20) POTENTIAL VIOLATION:
Chem-Tronics does not have a telephone or two-way radio system capable of summoning emergency assistance at the filter press area outside of Building 4. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.32(b))

RESPONSE:
Chem-Tronics has installed a telephone in the waste treatment area. In addition to the telephone the operator also carries a two way radio, and is in communication with safety and security.

21) Personnel in the filter press area and 90-day hazardous waste accumulation outside of Building 4 do not have immediate access to internal alarm or communication systems, or voice or visual contact with another employee. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.34(a))

RESPONSE:
Chem-Tronics has installed a telephone in the waste treatment area. In addition to the telephone the operator also carries a two way radio, and is in communication with safety and security.

PICTURE # 16. ITEM # 21. SUBJECT: Waste treatment yard telephone location.



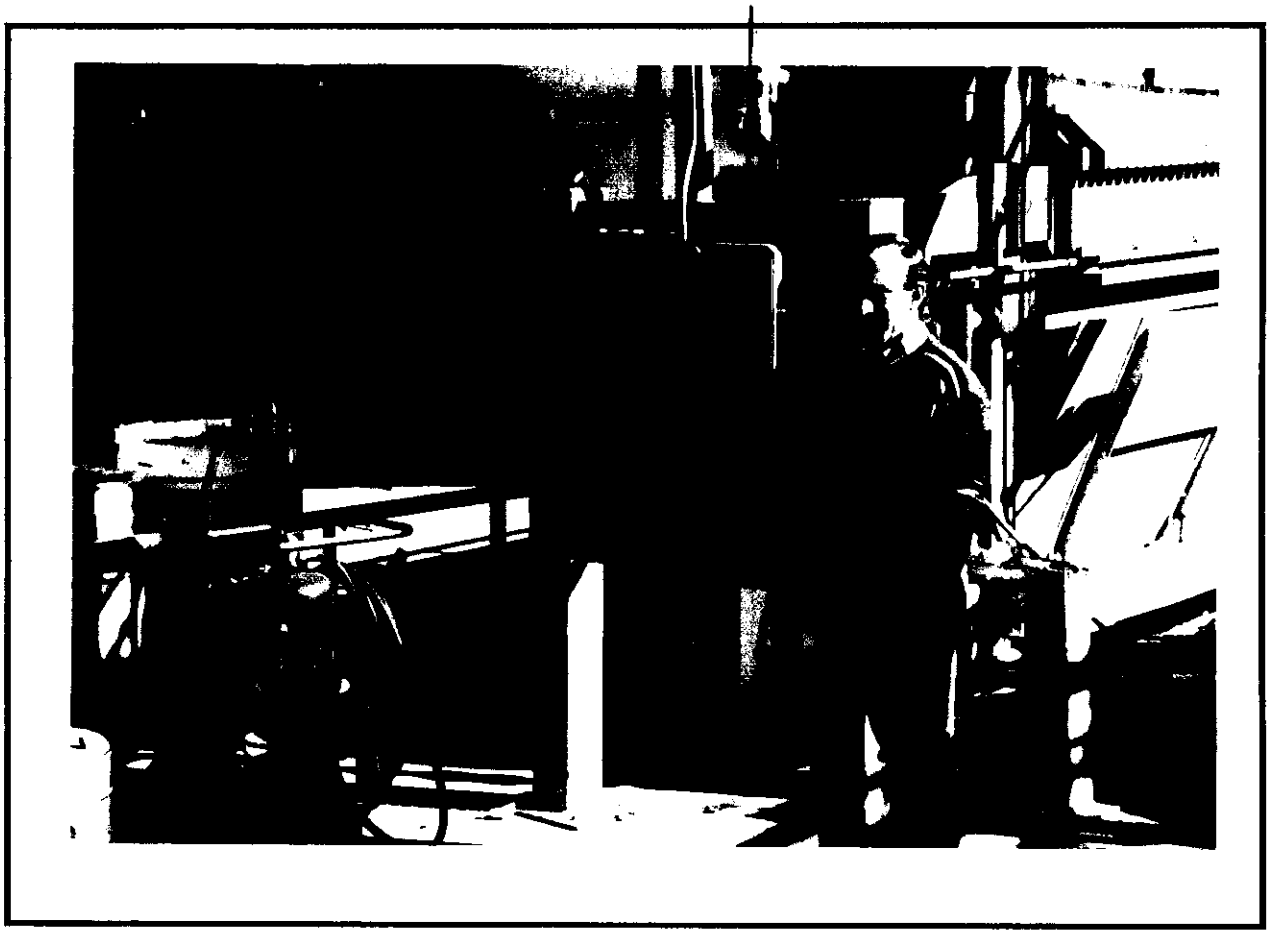
22) POTENTIAL VIOLATION:
Personnel in the filter press area outside of Building 4 cannot immediately access external emergency assistance. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.34(b))

RESPONSE:
Chem-Tronics has installed a telephone in the waste treatment area. In addition to the telephone the operator also carries a two way radio to communicate with safety and security.

23) POTENTIAL VIOLATION:
Personnel in the filter press area and 90-day hazardous waste accumulation outside of Building 4 do not have immediate access to internal alarm or communication systems, or voice or visual contact with another employee. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.34(a))

RESPONSE:
Chem-Tronics has installed a telephone in the waste treatment area. In addition to the telephone the operator also carries a two way radio to communicate with safety and security.

PICTURE # 17, ITEM # 23, SUBJECT: Waste treatment yard telephone location.



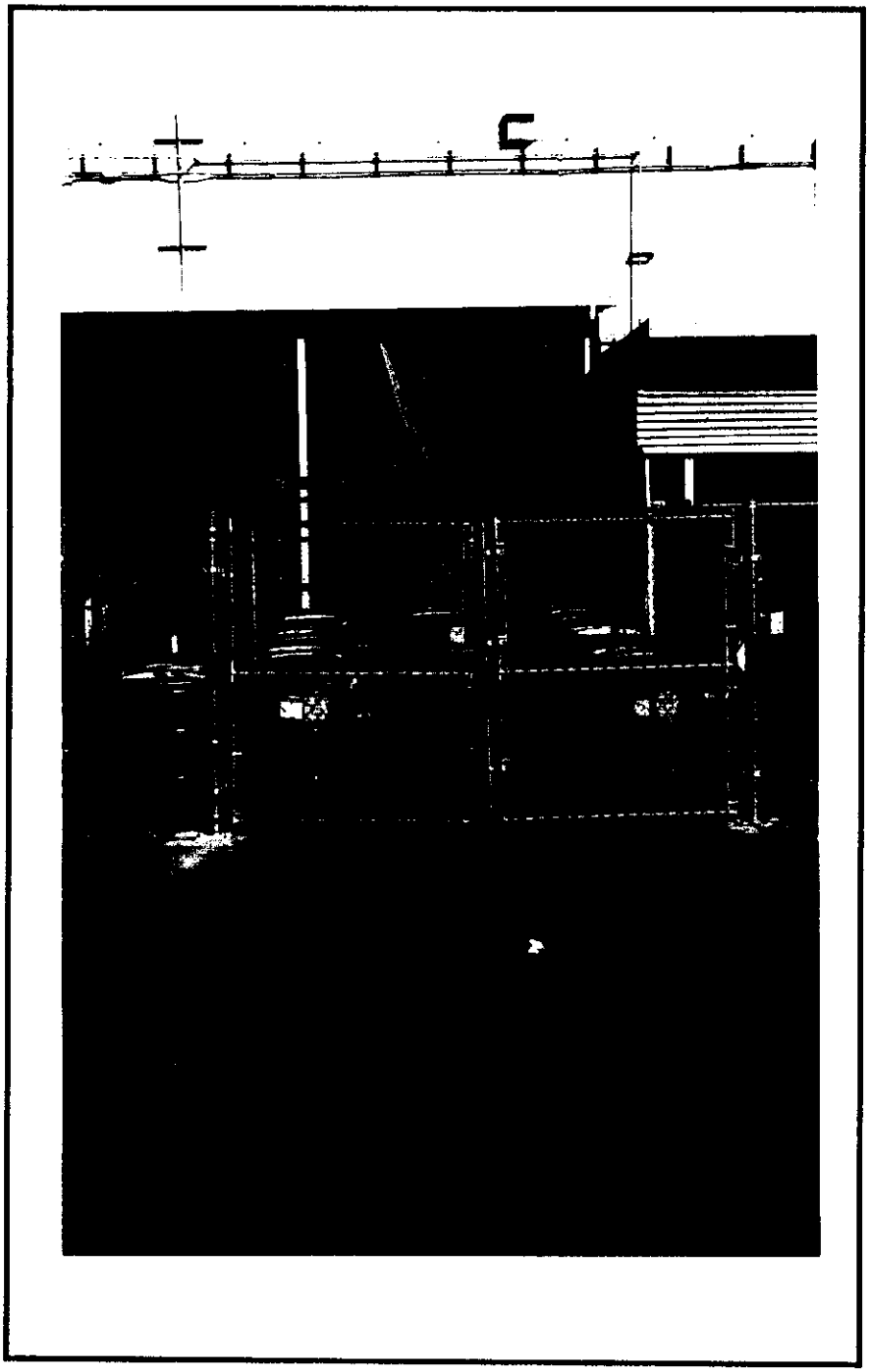
24) POTENTIAL VIOLATION:

There was inadequate aisle space (Appendix C, Photograph 2 at the 90-day hazardous waste accumulation area to allow for unobstructed movement of fire and spill control equipment in an emergency. (40 CFR Part 262.34(a)(4) directing to 40 CFR Part 265.52)

RESPONSE:

A fence and a four foot aisle has been installed.

PICTURE # 18. ITEM # 24. SUBJECT: The 90 Day Hazardous Waste Accumulation Area .



RECORD KEEPING

25) POTENTIAL VIOLATION:

Chem-Tronics did not determine that a hazardous waste was restricted from land disposal; specifically, manifest number 89815121 (Chem-tronics attachment R-1) indicates that F006 hazardous waste was not treated prior to land disposal. (40 CFR Part 268.7(a))

RESPONSE:

Chem-Tronics has assessed the appropriate restrictions prior to land disposal. Attached is the documentation from the TSD facility (see attachment R-1)

26) POTENTIAL VIOLATION:

Chem-Tronics did not contact nor locate a treatment and recovery facility prior to disposal at a land disposal facility (see manifest number 89815121, Chem-tronics attachment R-1). (40 CFR Part 268.8(a)(2)(ii))

RESPONSE:

Chem-Tronics has assessed various treatment and recycling processes prior to land disposal. Attached are the documentation from the treatment and recycling facility (see attachment R-1)

27) POTENTIAL VIOLATION:

Chem-Tronics does not maintain records to verify that they notify TSD's that hazardous waste are restricted and require treatment prior to disposal (see manifest number 89815121, Chem-tronics attachment R-1) (40 CFR Part 268.7(a)(1))

RESPONSE:

Chem-Tronics maintains records showing notification to TSD's that hazardous waste are restricted and require treatment prior to disposal. The waste in question, neutralized sludge filter cake, becomes F006 due to a cross contamination of nickel during the neutralization process. The waste is treated at the Waste Site prior to land disposal.(see attachment R-1)

28) POTENTIAL VIOLATION:

Chem-Tronics does not maintain copies of all notices and certifications for at least 5 years. (40 CFR Part 268.7(a)(6))

RESPONSE:

Chem-Tronics keeps copies of notices and certificates, on file at its facility at all times . Chem-tronics will make them available to the EPA on a mutually convenient basis.

ATTACHMENT R-1

Land Disposal Restriction Form for F006 Waste

Manifest # 89815121

Evaluation of Waste Stream

3 Pages

USPCI, INC.

LAND DISPOSAL RESTRICTION FORM FOR F006 WASTE

Generator Name: DAVID IVESTER EPA ID#: CAD990845513

Address: 1150 west Bradley

City: EL CAJON State: CALIF Zip: 92020

USPCI Acceptance Number: GM88-463

Manifest Number Associated With Waste Shipment: 89815121

I hereby certify to U.S. Pollution Control, Inc., (USPCI) that the hazardous waste identified as F006 meets the applicable treatment standards set forth in 40 CFR 268.41 and/or 268.43 as indicated below:

(check the treatment standards that are met before shipment of the waste to USPCI, Inc.)

F006 Nonwastewater

✓	Cyanides (Total)	590.0	mg/kg
✓	Cyanides (Amenable)	30.0	mg/kg
✓	Cadmium	0.066	mg/l
✓	Chromium (Total)	5.20	mg/l
✓	Lead	0.51	mg/l
	Nickel	0.32	mg/l
✓	Silver	0.072	mg/l

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D and all applicable prohibitions set forth in 40 CFR Part 268.32 or RCRA section 3004 (d). I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

NOTICE: THIS SECTION MUST BE COMPLETED.
Basis for this certification - Describe the knowledge upon which the certification is made and attach the most recent analytical data:

I hereby notify U.S. Pollution Control, Inc. (USPCI) that this waste shipment of F006 does not meet the treatment standards set forth in 40 CFR 268.41 and/or 268.43 for the constituents indicated below:

(check the treatment standards that are not met before shipment of the waste to USPCI, Inc.)

F006 Nonwastewater

	Cyanides (Total)	590.0	mg/kg
	Cyanides (Amenable)	30.0	mg/kg
	Cadmium	0.066	mg/l
	Chromium (Total)	5.20	mg/l
	Lead	0.51	mg/l
✓	Nickel	0.32	mg/l
	Silver	0.072	mg/l

I have attached available waste analysis.
I hereby certify that all information submitted above is complete and accurate to the best of my knowledge and information.

DAVID IVESTER — Printed Name
ENV/SAFETY ANALYST — Title
(619) 258-5059 — Telephone

Authorized Signature of Generator — 12-05-89 Date

REV1SEPT89

[illegible] and Welfare Agency
[illegible]. 2050—0039 (Expires 9-30-91)
(Form designed for use on elite (12-pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

[illegible]FORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible]

Manifest Document No.

2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
[illegible] TRONICS INC
1150 W. BRADLEY EL CAJON CA. 92020

4. Generator's Phone ([illegible]) [illegible]

A. State Manifest Document Number 89815121

B. State Generator's ID [illegible]

5. Transporter 1 Company Name [illegible]

6. US EPA ID Number [illegible]

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name [illegible]

8. US EPA ID Number [illegible]

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
U.S. POLLUTION CONTROL
[illegible]
[illegible]

10. US EPA ID Number [illegible]

G. State Facility's ID

H. Facility's Phone (801) 534-0054

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. HAZARDOUS WASTE, SOLID, N.O.S., [illegible], NA 9189, EQ	[illegible]	[illegible]	[illegible]	Y	State 491; EPA/Other F006
b.					State; EPA/Other
c.					State; EPA/Other
d.					State; EPA/Other

J. Additional Descriptions for Materials Listed Above
TITANIUM 27%
ALUMINUM 14%
[illegible] 4%
G01-88-463

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information
WEAR PROTECTIVE CLOTHING

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: David [illegible]
Signature: [signature]
Month Day Year: [illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible]
Signature: [signature]
Month Day Year: [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Month Day Year

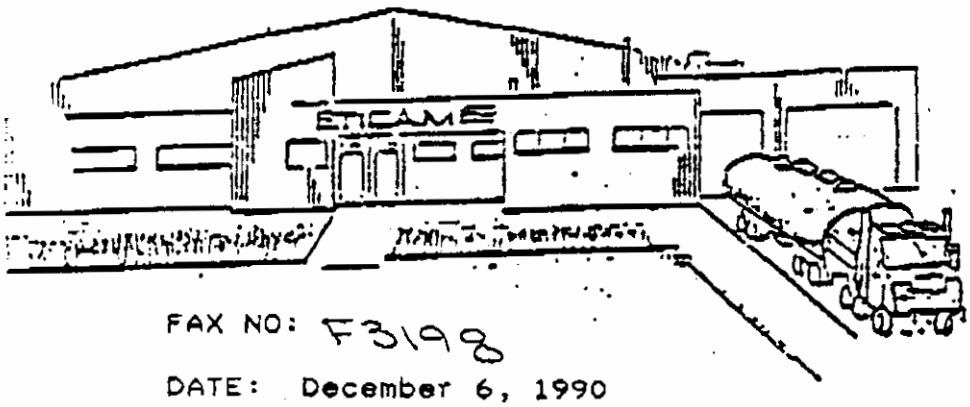
GENERATOR / TRANSPORTER / FAC[illegible]

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-755[illegible]

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

YELLOW: GENERATOR RETAINS



ETICAM
2095 Newlands Drive
Fernley, Nevada 89408

Phone: 800-648-9931
702-789-1044

Telefax: 702-575-2803

FAX NO: F3198

DATE: December 6, 1990

TOTAL PAGES: 1

TO: Dave Ivestor

Chemtronics
Fax #: 619-562-9672

FROM: Chris Carling

SUBJECT: Waste Titanium

Dear Dave

After evaluating the waste titanium generated by Chemtronics we find that reclaiming the metal is not feasible at the present time. However, we thank you for sending us your other waste and look forward to a long and mutually beneficial association.

Very Truly Yours

Chris Carling
Sales & Marketing